

AN ANALYSIS OF THE EFFECTS OF LOCAL DISCRETIONARY LEVIES ON THE
FISCAL EQUITY OF A STATE FOUNDATION FINANCE SYSTEM

By

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Dedicated to the memory of my mother and father. . .
my first teachers and lifelong encouragers.

VIRGINIA LOWRY FREDRICKSON

and

HERBERT VINCENT FREDRICKSON

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“Go with someone you trust . . . and watch for the big signs along the way,” was how my nephew Brian, who is legally blind, responded when asked how he was able to run cross country track. Good advice for track as well as any life journey. I am grateful for family, friends, teachers, colleagues, and mentors who coached and supported me during this educational journey.

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" . . . All things work together for good to them that love the Lord."

Romans 8:28

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Abstract of Dissertation Presented to the Graduate School
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The purpose of this quantitative study was to analyze the effects of local discretionary levies on the fiscal equity of a state foundation finance system. The research included an analysis of the equity of the 1996-97 Florida Education Finance Program (FEFP) as discretionary levies were applied. The FEFP included revenue from an equalized foundation component and three nonvoted discretionary levies, i.e., capital outlay/maintenance, discretionary current operating, and supplemental discretionary. Not all levies were equalized by the state.

The effects of the discretionary levies on the equity of the FEFP were measured using the statistical constructs of resource accessibility, wealth neutrality, and tax yield. The results of the study indicated that additional revenues from the discretionary levies had slight disequalizing effects as indicated by resource accessibility measures. The disequalizing effect was the greatest when the capital outlay/maintenance revenue was applied. Calculations of the coefficient of variation indicated that although the effect on

resource accessibility was nominal, the increase in standardized variability was most evident when the capital outlay/maintenance revenues were introduced.

Additional revenues from the discretionary levies had slight disequalizing effects on equity as indicated by the correlation coefficient and coefficient of determination. Wealth neutrality and equity decreased as the three discretionary levies were added to the base revenue. However, calculations of the regression coefficient, McCloone index, and Gini coefficient indicated that additional revenues from the discretionary levies had little effect on equity and wealth neutrality.

Taxpayer equity calculations indicated minimal disequalizing effects when the strength and magnitude of the relationship between the tax rate and the per pupil revenues were measured after the discretionary millage was applied. The positive correlation coefficient indicated that increasing tax rates were associated with increasing per-pupil revenues. The regression coefficient was consistently minimal, indicating little effect on the equivalence of tax yield.

In summary, a trend toward disequalization emerged as the three discretionary levies were applied individually and in combination. The application of the capital outlay/maintenance levy had the greatest disequalizing effect. If the trend were to continue, further use of discretionary levies would have an even greater effect on the equity of the FEFP.

CHAPTER I INTRODUCTION

Fiscal equity in financing public education has been a substantive issue with a long history in the school finance literature.¹ Fair treatment of all students, including equivalent educational support regardless of individual needs, was fundamental to the concept of fiscal equity.²

The Tenth Amendment to the Constitution of the United States made provision for the operation of public schools by the states.³ Each state constitution sets forth the responsibility for the education of its citizenry. State legislatures were required by their respective state constitutions to create and maintain “thorough,” “efficient,” “effective,” “adequate,” or “equal” educational systems. State constitutional language related to educational finance was consistent with the general belief that all children had a right to a basic level of opportunity and often times quality in their education.⁴

Both students and taxpayers were considered in the discussion of fiscal equity. Student equity referred to the basic fairness in the distribution of available educational resources. According to Garms et al., the goal of “equity” in school finance systems should be expressed as “equality of educational opportunity.” In practice, this concept has been limited to mean assuring equal dollars per student or enough dollars to provide comparable programs for students with differing needs.⁵

The three basic equity principles included horizontal equity, vertical equity, and fiscal neutrality. The principle of horizontal equity meant that students who were alike

should receive equal shares. In a horizontally equitable condition, equal resources were available to students with equal needs.⁶ The principle of vertical equity meant that students with legitimate differences were entitled to appropriately unequal treatment in the distribution of shares. In a vertically equitable condition, varying levels of resources were necessary to meet the differing needs of students.⁷ The principle of wealth neutrality, also known as fiscal neutrality or equality of opportunity, required that the quality of the education a student received should not be a function of the wealth of the local school district. In a wealth neutral condition, the level of fiscal support that students received was not linked to the wealth of the local community in which they were educated.⁸

Taxpayer equity meant that a basic fairness existed among the taxpayers of a state in their support for education. In a taxpayer equitable condition, equal resources per-student were the result of equal tax effort among taxpayers.⁹

Adequacy, excellence, and efficiency were constructs linked with school funding.¹⁰ Adequacy was a measure of the level of student funding that emphasizes the level of support throughout the distribution.¹¹ Whereas equity stressed distribution fairness, adequacy emphasized the acceptable level of support throughout the distribution. Excellence meant achieving a high degree of educational quality. In the realm of school finance, excellence translated to a level of fiscal support sufficient to fund such quality.¹² Efficiency as a finance construct meant maximizing educational output given minimum resources.¹³ Adequacy, excellence, and efficiency were all linked to the concept of equity. However, the focus of this study was equity.

Educational researchers and theorists have developed and evaluated methods that promoted equity of public educational funding. A variety of school finance programs

have been developed by the states to distribute revenues for the development and maintenance of the public educational system. However, a comprehensive and equitable state school finance program required four fundamental components: (1) the fiscal capacity of local school districts to provide for education, (2) adequacy of revenues for a student's education regardless of the efforts of local school districts, (3) the educational needs of the child, and (4) the provision for additional revenues to local school districts that are unable to provide programs and services of comparable quality due to higher costs.¹⁴

Statement of Problem

Educational foundation funding plans were designed to sustain equity. These distribution systems were planned to achieve equality of educational opportunity for each child and guarantee each student a certain foundational level of funding. The intent of the minimum foundation approach was to ensure that each district had a minimum level of funds, regardless of the district's wealth or fiscal capacity. This approach could also restrict the overall level of funds that districts raised beyond the minimum in local effort. The state determined the minimum level of funds from state and local revenues and within the state's general tax structure, the maximum level of funds available. Funding beyond the required minimum was generated primarily from local revenue. Each district had the discretion to raise local revenues to reach the state determined maximum funding level.¹⁵

In theory, the minimum foundation system was designed to assure a minimally acceptable level of education to every student. However, in practice, equity problems could emerge when districts levied discretionary dollars which may not be equalized by

the state to supplement a minimum foundation program. When unequalized local discretionary taxes were assessed, the equity of the foundation system could be compromised. The introduction of unaided discretionary millage to a foundation funding plan exacerbated inequality.¹⁶

Thompson, Wood, and Honeyman characterized three problems that compromise equity when unequalized discretionary levies were permitted: (1) equalization of funds derived from millage rates above the minimum foundation level was not provided for in the basic foundation program, (2) districts generated less revenue and have less to spend if the discretionary millage is not applied, and (3) poor districts generated less revenue and have less to spend because the levies are not equalized.¹⁷

The Florida Education Finance Program (FEFP) was a minimum foundation program created by the state legislature in 1973. The purpose of the FEFP was to guarantee programs and services appropriate to Florida's public school students' needs regardless of geographic differences and local economic factors.¹⁸

With the implementation of the FEFP, the Florida Legislature significantly changed the method for funding its public schools by basing financial support on the individual student participating in a particular program, rather than on the number of teachers or classrooms.¹⁹ An examination of this system on the basis of its methodology for general education and expenditures indicated the funding system appeared to accomplish its intent of equalizing educational funding.²⁰ However, when supplementary discretionary effort expenditures and disparity in wealth were considered, the potential for inequity existed.

The Florida Constitution gave the authority to each school district to tax property to support education.²¹ Local revenue for the support of Florida's public schools was

derived almost entirely from property taxes. Local nonproperty taxes levied by school boards did not exist. Each of the 67 school districts in Florida was a countywide district. Each school board was required to levy the millage set forth by the legislature for its required local effort (RLE). The required local effort set by the legislature for the 1996-97 year was \$3,521,214,060.²² Each district's share of the state total of the required local effort was determined by a statutory procedure initiated by certification of the property tax valuations of each district by the Department of Revenue. Certifications varied because of assessment ratios designed to equalize the effect of differing levels of property appraisal on the FEFP. These rates were also adjusted because the required local effort could not exceed 90% of a district's total FEFP entitlement.²³

Seven types of school taxes were levied to support Florida's public schools. These included one required levy, the required local effort, and six optional levies. In addition to the required local effort fixed by the state, local school boards could set six types of discretionary levies. The six levies included (1) discretionary current operating, (2) operating/capital outlay, (3) capital outlay/improvements/maintenance, (4) debt service, (5) supplemental discretionary, and (6) sales surtax/capital outlay.²⁴ Approval of the local school board was required for the six optional levies. However, approval of the electorate was required for only three of the optional levies: (1) operating/capital outlay, (2) debt service, and (3) sales surtax/capital outlay. Districts were prohibited by the Florida Constitution from exceeding the rate of 10 mills a year on the nonvoted levies; i.e., required local effort, discretionary current operating, supplemental discretionary, and capital outlay/improvements/maintenance.²⁵ In addition, only two of the school levies, the required local effort and the supplemental discretionary levy, were equalized by the state.

The discretionary levies may have a disequalizing effect on the equity of the state educational finance distribution system. The effect of the discretionary local levies on the equity of the educational funding system warranted continued scrutiny.

Purpose of the Study

The purpose of this research was to examine the effects of additional revenues generated by discretionary and unequalized levies in a minimum foundation program to determine if the current funding system provided equalization in educational funding as originally intended.

Research Question

The research question addressed in this study was “How does the additional revenue generated by discretionary and unequalized levies affect equity in a foundation educational funding distribution system?”

Significance of Study

This study was intended to examine the public school system of Florida, with a particular focus on the funding methodology and to contribute to the research on fiscal equity in an educational foundation finance program. The study was also meant to provide an understanding of the predicament that occurs when district discretionary levies conflicted with overall state fiscal fairness.

The foundation system of the state of Florida was selected for this study because of its considerable public school enrollment, the economic diversity among its 67 districts, the wide range of needs in its student population, and the state’s attempt to create a highly equitable formula for the funding system. The foundation method was the

most prevalent educational finance scheme. Florida was one of 40 states to implement a foundation program.²⁶ Although earlier studies of Florida's educational finance plan found the system to be relatively equitable, continued examination of the effects of local discretionary levies on fiscal equity could be instructive. Florida's foundation funding method was selected for this study for these reasons.

Increased court attention to finance equity also has significance. Educational finance has been governed by case law on the topic. The courts have discussed the issue of educational equity in detail. Several state educational finance systems have been declared unconstitutional.²⁷ Critical to the examination of an educational finance plan was the system's adherence to legal standards for equalization of educational opportunities articulated by the courts. The present study served to measure the effects of additional revenues from discretionary millage relative to established legal principles.

Limitations

The focus of this study was equity. The assessments of equity were limited to horizontal per-pupil equity, wealth neutrality, and taxpayer equity. The equity of the distribution of resources among districts was examined; however, the distribution of funds within the districts was not. The study did not address vertical equity, adequacy, excellence, or efficiency.

Delimitations

Data from the state of Florida for the fiscal year 1996-1997 were analyzed. These data were limited to state and local fund sources. Federal fiscal data were not examined. Only data from K-12 public schools were examined. Private schools and post secondary institutions were not included in the study.

Methodology

The state of Florida's distribution system was the focus of this study. Data from the 1996-1997 Florida Education Finance Program (FEFP) were analyzed. This program included a foundation basic support program and was supplemented by a variety of levies, of which some were discretionary. Not all levies were equalized by the state. The year 1996-1997 was selected because it was the first year after the Florida legislature approved the supplemental discretionary millage.

Statistical techniques derived from equity theory were applied to determine the effect on equity. A combination of the mean per-pupil revenues and the levies were divided into four levels of aggregation, then analyzed to determine the equity of the FEFP distribution. Level one examined the revenues distributed through the base FEFP. Level two examined the revenues distributed through the base FEFP and the application of the capital outlay/maintenance millage. Level three examined the revenues distributed through the base FEFP and the application of the discretionary current operation millage. Level four examined the revenues distributed through the base FEFP and the application of the supplemental discretionary millage. The relative degree of fiscal inequity resulting from various combinations of the three discretionary levies was analyzed in levels five, six, and seven. Level eight examined the total degree of fiscal inequity when the combination of the capital outlay/maintenance, discretionary current operation, and supplemental discretionary millages was applied and compared with the base FEFP. Finally, all measures of resource accessibility, wealth neutrality, and tax yield were applied to each combination.

Equity was measured according to the standards of resource accessibility, wealth neutrality, and tax yield. Univariate measurements utilized to measure resource

accessibility included the mean, range, restricted range, federal range ratio, variance, standard deviation, and coefficient of variation. Multivariate regression and econometric measurements utilized to measure wealth neutrality included the correlation coefficient, coefficient of determination, regression coefficient, Gini coefficient, and McCloone index. Multivariate regression measurements utilized to measure tax yield included the correlation coefficient and regression coefficient. These measurements provided assessments of per-pupil horizontal equity, local fiscal capacity, and taxpayer equity. Equity requirements were the focus of the statistical analyses.

Design of Study

This chapter provided an overview of the study including an introduction to the concept of fiscal equity, a statement of the problem, the purpose of the study, the research question, and the significance of the study. The limitations and delimitations, methodology, and the design of the study were also explained in this chapter.

In Chapter 2, a review of the literature relevant to the study was presented. This review included the history and theory of finance equity, a discussion of equity principles, the foundation method of fund distribution, an overview of the FEFP, an account of taxation of school property in Florida and past equity studies on the FEFP, and a review of finance equity litigation. The chapter closed with an update of current educational finance issues.

Chapter 3 provided a detailed description of the research methodology. The results of the study were described in Chapter 4. Chapter 5 included a summary, findings, and conclusions of the study, and implications for further study.

Notes

1. Robert Berne, "Program Equity for All Children; Meaningful Goal or Impossible Dream?" Journal of Education Finance 8(4) (December 1994): 502-517; Robert Berne, "Equity Issues in School Finance," Journal of Education Finance 14 (Fall 1988): 159.
2. David Thompson, R. Craig Wood, and David S. Honeyman, Fiscal Leadership for Schools: Concepts and Practices (White Plains, NY: Longman, 1994), 56-60; Thomas H. Jones, Introduction to School Finance (New York: Macmillan, 1985), 5, 12-13, 32-36; Marilyn Hirth, "Systemic Reform, Equity and School Finance Reform," Educational Policy 10 (December 1996): 468; Richard Rossmiller, "Equity or Adequacy of School Funding," Educational Policy 8(4) (December 1994): 616-618.
3. U. S. Const. amend. X.
4. Thompson, Wood, and Honeyman, 282-286; Kern Alexander, "The Purpose of Education: Peace, Capitalism and Nationalism," Journal of Education Finance (Fall 1994): 17-28; William Thro, "The Third Wave: The Impact of the Montana, Kentucky, and Texas Decisions on the Future of Public School Reform Litigation," Journal of Law and Education, 19 (Spring 1990): 229; Kern Alexander and Richard Salmon, Public School Finance (Needham Heights, MA: Allyn and Bacon, 1995), 4; Deborah Verstegen, "Two Hundred Years of Federalism: A Perspective on National Fiscal Policy in Education," Journal of Education Finance 12 (Spring 1987): 576-518; Deborah Verstegen and Terry Whitney, "Emerging Judicial Theories of Adequacy and Equity," Educational Policy 11(3) (September 1997): 330-331.
5. Thompson, Wood, and Honeyman, 57-58. Charles Benson, The Economics of Public Education (Boston: Houghton Mifflin, 1978) 257-258; Walter Garms, James Guthrie, and Lawrence Pierce, School Finance: The Economics and Politics of Public Education (Englewood Cliffs, NJ: Prentice-Hall, 1988), 130; Richard Rossmiller, "Achieving Equity and Effectiveness in Schooling," Journal of Education Finance 12, (Spring 1987): 562-563.
6. Robert Berne and Leanna Stiefel, The Measurement of Equity in School Finance (Baltimore: The Johns Hopkins University Press, 1984), 13.
7. Ibid., 13-14.
8. Berne and Stiefel, 17; Percy Burrup, Vern Brimley, Jr., and Rulon Garfield, Financing Education in a Climate of Change, 5th ed. (Boston: Allyn and Bacon, 1993), 80-81.
9. Berne and Stiefel, 17, 41-42. James Guthrie, Walter Garms, and Lawrence Pierce, School Finance Education Policy: Enhancing Educational Efficiency, Equality, and Choice, 2nd ed. (Englewood Cliffs NJ: Prentice Hall, 1988), 143.

10. James Ward and William Camp, "An Analytical View of Two Decades of Reform in School Finance," Journal of Education Finance 14 (Summer 1988): 1-6.

11. Guthrie, Garms, and Pierce, 150-152; Austin Swanson and Richard King, School Finance: Its Economics and Politics, 2nd ed. (New York: Longman, 1997), 296; Thompson, Wood, and Honeyman, 42-56.

12. Arthur Stellar, "Implications for Programmatic Excellence and Equity," in The Fiscal, Legal, and Political Aspects of Elementary and Secondary Education eds. Van D.Mueller and Mary McKeown (Cambridge, MA: Ballinger, 1986), 65-114; Burrup, Brimley, and Garfield, 81; Guthrie, Garms, and Pierce, 29.

13. Burrup, Brimley, and Garfield, 32; Guthrie, Garms, and Pierce, 28-34; L. Dean Webb, Martha M. McCarthy, and Stephen B. Thomas, Financing Elementary and Secondary Education (Columbus, OH: Merrill, 1988) 192; David Monk, Educational Finance: An Economic Approach (New York: McGraw-Hill, 1990), 4-11; Swanson and King, 259-278.

14. Kern Alexander and K. Forbis Jordan, Educational Need in the Public Economy (Gainesville, FL: University Presses of Florida, 1976), 337.

15. Jones, 105-111; Burrup, Brimley, and Garfield, 93; Alexander and Salmon, 200.

16. Thompson, Wood, and Honeyman, 219-223; Guthrie, Garms, and Pierce, 133-137; Alexander and Salmon, 200-204; Jones, 111.

17. Thompson, Wood, and Honeyman, 222.

18. Fla. Stat. 236.012 (1).

19. Florida Legislature, Office of Program Policy Analysis and Government Accountability, Florida's Education Funding System (Tallahassee, FL: The Florida Legislature, 1996), 2; Kern Alexander and Lee Shiver, "Equalization Among Florida School Districts," Journal of Education Finance, 9 (Summer 1983): 53-62.

20. David Vaughan, "The Impact of Florida's 1973 School Finance Reform on Poor and Minority Children," in Minorities, the Poor, and School Finance Reform, ed. Robert Brischetto (Washington DC: National Institute of Education, 1979); Kern Alexander and Lee Shiver, "Equalization Among Florida School Districts," Journal of Education Finance 9 (Spring 1983): 53-62; J. Michael O'Loughlin, R. Craig Wood, and David S. Honeyman, A Study of the Effects of the Sparsity Supplement on the Equity of the Florida Education Finance Program (Gainesville, FL: UCEA Center for Education Finance, 1992); Gaylon D. Currie, An Examination of the Equity of Capital Outlay Funding in the State of Florida and the Equity of General Expenditures for Education (Doctoral Dissertation, University of Florida, 1992); Steven D. Stark, David S. Honeyman, and R. Craig Wood, "The Florida Lottery: Its Use as a Substitute for

Existing Funds and its Effects on the Equity of School Funding," Journal of Education Finance 18 (Winter 1993): 231-242; Susan R. Summers, An Examination of Supplantation and Redistribution Effects of Lottery Allocations to a Community College System (Doctoral Dissertation, University of Florida, Gainesville, FL, 1993), 156-166. Jeffrey Maiden and R. Craig Wood, "An Examination of the Discretionary Elements of the Florida Education Finance Program," Journal of Education Finance, 21 (Fall 1995), 271-290; Mary L. M. Chambers, The Effects of Additional Revenues from Capital Outlay Transfers on the Equity of a State School Finance System (Doctoral Dissertation, University of Florida, 1996); Yasser Nakib and D. Herrington, "The Political Economy of K-12 Education Finance: The Context of a Fast Growing, Large State," Journal of Education Finance 23 (Winter 1998): 351-373.

21. Fla. Const. Article VII Section 9.

22. Division of Public Schools, 1996-97 Florida Education Finance Program (Tallahassee, FL: Florida Department of Education, 1996), 2-3.

23. Ibid.

24. Fla. Stat. 200.001(3).

25. Fla. Stat. 200.071.

26. Thompson, Wood, and Honeyman, 224; Florida Legislature, Office of Program Policy Analysis and Government Accountability. Florida's Education Finance System Compared to Other States, March 11, 1996, 7.

27. Julie Underwood, "School Finance Litigation. Legal Theories, Judicial Activism, and Social Neglect," Journal of Education Finance 20 (Fall 1994): 146-149; Julie Underwood and Deborah Verstegen, eds, "School Finance Challenges in the Federal Courts: Changing Equal Protection Analysis" in The Impact of Litigation and Legislation on Public School Finance (New York: Harper & Row, 1994), 177-192; Deborah Verstegen and Terry Whitney, "From Courthouses to Schoolhouses: Emerging Judicial Theories of Adequacy and Equity," Educational Policy 2(3) (September 1997), 330-351.

CHAPTER 2 LITERATURE REVIEW

Introduction

This chapter is an examination of the literature relevant to this study. The chapter begins with a discussion of the history and theory of educational funding equity. A review of equity principles and the foundation method of fund distribution is followed by an overview of the FEFP. School taxes levied in Florida are explained in the next section. Previous equity studies conducted on the FEFP are then reviewed, followed by a discussion of court cases at both the federal and state levels related to the equitable distribution of funds for public education. The chapter closes with an update on current educational finance issues.

History of Finance Equity

States did not assume a major role in financing schools until the 20th century, despite the fact that schools were their constitutional responsibility. Schools were financed by local property taxes, minimal state aid, and private contributions. Any equalization of opportunities came from within, not among, school districts.¹ Per-pupil expenditures varied greatly in this scheme, dependent on the wealth of individuals, capacity of tax bases, and willingness of taxpayers to fund schools. The adequacy and equity of school programs were closely aligned with property assessments and tax rates.²

Such conditions were present at the turn of the century when Elwood P. Cubberly advocated a state role in school finance:

[W]hile it may be possible to maintain schools entirely or almost entirely by local taxation, the doing so involves very slight efforts on the part of some communities, and very excessive burdens for other communities... [T]hese excessive burdens, borne in large part for the common good, should be in part equalized by the state. To do this some form of general aid is necessary.³

In 1906, the publication of Cubberly's monograph marked the beginning of scholarly discussion about equity in school finance. Cubberly was the first to advocate the concept of state responsibility for assuring a minimum level of education. The concept of equal educational opportunity was a new idea at the beginning of the century.⁴

Cubberly encouraged state-wide systems of schools so that equitable funding was developed. According to Cubberly, the state had the responsibility to equalize educational opportunities considering the available resources. Providing state financial aid to districts not able to produce revenue equivalent to other geographic areas of the state was a central tenet to Cubberly's writing.⁵

Theoretically all children of the state are equally important and are entitled to have the same advantages; practically this can never be quite true. The duty of the state is to secure for all as high a minimum of good instruction as is possible, but not to reduce all to this a minimum; to equalize the advantages to all as nearly as can be done with the resources at hand; to place a premium on those local efforts which will enable communities to rise above the legal minimum as far as possible; and to encourage communities to extend their educational energies to new and desirable undertakings.⁶

Although Cubberly believed local districts should support education beyond the minimum level, he also believed that state funds were more appropriate than local funds for equalization.⁷ Cubberly's major contribution was his conceptualization of state educational aid to localities.⁸

In 1923, George D. Strayer and Robert M. Haig proposed the concept of a minimum, or foundational, level of funding for each child in the state.⁹ This concept was based on the principle of equalization of educational opportunity. The three key components in this plan were: (1) establishing schools or other arrangements that were sufficient to provide every child in the state with equal educational opportunity up to some prescribed minimum, (2) state or local taxes for education based on ability to pay, and (3) the direct administration of the schools by a state department of education.¹⁰

The Strayer-Haig formula proposed a required local effort with the state providing the difference in amount raised by that tax and a specified floor. This plan guaranteed that any deficit between revenues generated by the richest district and by other districts at the same rate be made up by the state. Essentially, the state granted each district enough funds, in combination with the required local effort, to support a minimally acceptable "foundation" level of education.¹¹

Strayer believed that the same tax rate for local effort should be applied throughout the state. His concern was that permitting districts to generate tax dollars beyond those resulting from the statewide local effort tax rate would have disequalizing effects. Strayer's conception of local effort differed from Cubberly's in that Strayer believed local districts should have the discretion to tax at a higher level.¹²

In 1922, Harlan Updegraff advanced the concept of equal opportunity by maintaining that state aid should be offered to poorer districts. In addition, Updegraff proposed, districts should be rewarded for effort by providing equal yield for equal effort. According to Updegraff, this system would promote funding equity and maintain local control over education.¹³

In 1923, Updegraff and King urged the adoption of a percentage equalizing plan. This plan provided the difference between a fixed state and a local contribution based on property wealth in the district relative to the state. An equalizing system that rewarded tax effort offered local incentive to rise above the state foundational level.¹⁴

In 1923, Strayer and Haig suggested that economic indicators could be used as an alternative to property valuations for purposes of school fund equalization. They proposed that local fiscal capacity in New York be determined by a combination of taxable income and one-tenth of the full value of real estate divided by two. According to Strayer and Haig, this combination was more accurate in determining economic resources.¹⁵

Strayer and Haig proposed a system that had the effect of capturing a portion of the local property tax for state purposes. The state specified a dollar amount per student to which each school district was entitled. This was the amount necessary to guarantee a minimally adequate education. Each district was required by the state to levy a property tax at a fixed rate called the "required local effort." This required levy was, in effect, a state tax. The state provided the difference between the amount raised by the required local effort and the guaranteed expenditure level. According to Strayer and Haig's plan, the richest property districts that raised more than the guarantee received no state equalization funds. The poorest property districts that raised very little with the tax at the specified rate received substantial equalization funds. The combination of state money and required local effort enabled the legislature to establish a guaranteed level sufficient for a minimal education in the foundation system. In essence, the state formed a partnership with local districts.¹⁶

Paul R. Mort, a student of Strayers at Columbia University, extended the concept of equalization of educational opportunity. He believed that a foundational level of education should be based on educational need. Mort stated,

The educational need of a community is regarded as the composite of all of those elements in the community that would affect the cost of the public educational offering demanded by a state program for making available to all children a satisfactory minimum educational opportunity.¹⁷

This method of satisfying each child's educational needs was referred to as the "satisfactory equalization program."¹⁸

Mort espoused specific elements for a satisfactory educational equalization program that, in combination, served a measure of educational cost and need. These elements were (1) educational activities present throughout the state, (2) any unusual expenditures required to provide a minimum educational program, and (3) offering a costlier program or unusual conditions requiring additional expenditures to meet the minimum.¹⁹

Ten years after Strayer and Haig proposed their economic indicators, Paul J. Mort criticized this plan because it defined theoretical taxing capacity under an ideal system of taxation instead of the actual situation. According to Mort, the power to tax belonged with state legislatures, not the local taxing unit.²⁰ Mort claimed,

The true criterion of the relative ability of local units to pay for education is the ability-to-pay under the taxing system established by the state rather than the ability-to-pay under an ideal taxing system. . . . Since we must deal with communities which have no power over their tax systems except through state action, we cannot consider their ability as it would be under an ideal tax system. To build our system of state aid on such a foundation would throw excessive burdens upon actual taxpayers in some communities, simply because there happened to be wealth in those communities that was not taxable under the existing system of taxation.²¹

Mort created the weighted pupil concept and continued to expand the concepts of per-pupil equity cost variations, student-teacher ratios, facility conditions, and sparsity factors.²² Roe L. Johns and Edgar L. Morphet, two of Paul Mort's students, continued to expand the idea of state equalization programs from the 1940s to the 1980s. They identified additional variables that impacted educational costs, including cost differences associated with different educational programs and the extra costs associated with population sparsity.²³

During the 1940s, Henry C. Morrison advocated statewide funding of public schools. He believed that inequities were inherent in a system of local funding. Morrison reasoned that education was a state, not a local, function and that local fiscal capacity should not be allowed to affect educational opportunity. He believed that the benefits and costs of educational programs reached beyond the local level to the state, therefore educational systems should be state funded. Morrison maintained that if education remained a local function, rich districts would always acquire greater resources than poorer districts.²⁴ Morrison wrote,

Our people still largely think of public education as a purely individual and local benefit . . . poor school districts are looked upon as poor relations at best, and perhaps not even that relationship is acknowledged.²⁵

Morrison proposed each student be provided with an equivalent level of funding from revenue generated through state taxes. These taxes included statewide levied property taxes, state income taxes, state taxes on corporations, and income from state school lands or invested school funds.²⁶

Morrison believed in the American ideal of federalism that gave the states plenary power over public education. Local school districts were considered subdivisions of the states. According to Morrison, this belief legitimized the state bypassing local entities

for educational funding control while maintaining the American governance system.²⁷

Morrison's funding scheme differed from Strayer's in that the district was circumvented.²⁸

These researchers built the conceptual base upon which fiscal equalization programs were developed. Although all fiscal equalization formulas were designed to allocate more state aid per unit to school districts with low fiscal capacity, several types of equalization programs existed. The focus of this section was the history of the foundation program.

Theory of Finance Equity

The research of the scholars discussed in the previous section established the basis for the theory of finance equity. Equity had various conceptualizations that went beyond the meaning of equality. Common to all was the concept of fairness.

This review was an examination of equity from the philosophical, financial, and research perspectives. Equal amounts were not always fair amounts. Justice may not be done by giving all an equal share. Equity was nearly equivalent to justice, but equality did not necessarily result in equity. Strict equality required that equals be treated as equals, but equity, fairness, or justice required that unequals be treated as unequals. Fair amounts depended on merit, need, and capacity—none of which were equally distributed.²⁹

Equity allows, or rather requires, discrimination by reference to morally relevant differences, and forbids discrimination in the absence of such difference. . . . The rule is to treat like cases alike and unlike cases differently.³⁰

Aristotle believed that equity was a matter of proportionate distribution and not confined to strict equality.³¹ This philosophical perspective applied to school finance

equity meant that it was fair to discriminate in favor of the disadvantaged, but unfair and inequitable to discriminate in favor of the privileged and advantaged. The concepts of equity and equal educational opportunity were generally accepted. However, the concept of equity had a unique perspective in public school finance.³² This theoretical review of the equity was intended to provide a conceptual framework in order to better understand the concept of equity in financing public schools.

During the 18th Century, "The Enlightenment" movement advanced the belief that human beings had certain natural rights. These "natural rights"—equality, property, and the pursuit of happiness, together with a democratic form of government and a humanitarian social philosophy—were expressed in the liberties and guarantees set forth in the U. S. Constitution. The practical expression of the natural rights of humanity was a result of a just society.³³

The philosopher John Rawls developed a theory of justice for society. Rawls' theory of justice maintained that natural duties among moral persons required mutual respect and treatment. Therefore, justice presumed equality. According to this theory, no one was entitled to preferential treatment unless there were compelling reasons. Any deviation from equal treatment must be judged impartially. Only for the least advantaged could a deviation from equal treatment be justified.³⁴

The issue of inequalities between school districts and attempts to rectify them has a long history in the American political culture. In 1823, Thomas Jefferson described his own "Bill for the Greater Diffusion of Knowledge," which he introduced to the Virginia Legislature in 1777 as a failure. According to Jefferson, the bill failed because the Virginia Legislature would not tax at the state level to support the system but instead

elected to raise funds for public education at the local level. Jefferson said such a plan would not work “because the rich will not pay for the education of the poor.”³⁵

The contemporary study of school finance was closely aligned with the economics of education. According to Kern Alexander, “Equity requires that additional funds be expended if the state’s moral and legal obligation of an efficient system is to be met.”³⁶ Regardless of the discipline, the equalization of educational opportunity through the equitable distribution of resources based on educational need had been a central focus. Equality should exist for students and taxpayers in resource inputs, process, and/or results. Concerns for other issues in public educational funding have been secondary to the research emphasis on equity.³⁷

Equity Principles

Researchers in school finance used three principles to measure the equity of the distribution of fiscal resources for education. These principles were horizontal equity, vertical equity, and fiscal neutrality. Equity principles were applied to determine whether a state school finance program was equitable.³⁸

Horizontal equity referred to the equal treatment of equals. The principle meant “that students who are alike should receive equal shares.” Horizontal equity was measured by the distribution of the shares.³⁹ An example of such shares would be resource inputs. The elemental concern with horizontal equity was determining which students were alike. Once these categories were established, all students were required to receive the same share of that which was distributed.⁴⁰

Vertical equity referred to the unequal treatment of unequals. The principle meant that students who were different should be treated differently. The requirement

was that they received unequal shares of that which was distributed. Vertical equity required “both the identification of ‘legitimate’ differences among children and the selection of the nature and extent of the appropriate unequal treatment must be made; these choices are based largely on values.”⁴¹ These differences may be a function of the child, the district, or the program. Vertical equity allowed for the appropriate unequal treatment of unequals.⁴²

The third principle was that of fiscal neutrality, or equal opportunity. Berne and Stiefel defined equal opportunity as the condition in which there were no differences in treatment according to characteristics that were not considered legitimate. This principle was also known as wealth neutrality. In the study of the equity of state school finance programs it meant that education should not be a function of local wealth. Experts generally agreed that equity required fiscal neutrality.”⁴³

The most common input used in the analysis of state school finance programs were dollar measures either as revenues or expenditures.⁴⁴ Garms, Guthrie, and Pierce linked equity with equality.

The goal of school finance that is labeled equity is more commonly expressed as equality of educational opportunity. This expression recognizes that it is not possible to educate all students to the same level, for they have different preferences and innate abilities. There are many possible definitions of equal educational opportunity, but in practice the concept has been limited to mean assuring equal dollars per student or assuring enough money to provide comparable programs for students when their different needs and the costs of providing them have been taken into account.⁴⁵

A variety of theories guided finance equity, resulting in an assortment of delivery models. Flat grants and foundation plans were the products of the philosophical approach to finance equity that advocated a floor of basic education required for productive membership in society for all students. In this approach, the duty of the state

was to provide this very basic level of education.⁴⁶ Guaranteed tax plans, power equalizing, and percentage equalizing plans emerged from schemes based on the view of equal provision for educational services delivered. In these plans, some favored identical education for each district while others preferred to equalize district ability to raise funds.⁴⁷

Equity was also sensitive to the general principles of taxpayer and student equity. Student equity was a measure of wealth neutrality and fiscal resource accessibility. Equal yield for equal effort was central to taxpayer equity. Wealth neutrality required assurances that the quality of educational service was not a function of the local tax base capacity.⁴⁸

Some finance experts believed that equity was not synonymous with equality. Equity required expending and distributing revenues with fairness to students and schools. The weighted per-pupil approach to school finance equity was based on the belief that some students required greater expenditures. During the current discussions on school finance, those that emphasized equity focused on special support for poor, low-achieving, and handicapped students while those that focused on quality centered on incentives for schools and districts demonstrating improvement in student achievement.⁴⁹

Earlier definitions of equity focused on pupil-centered equalization of educational opportunity. More recent efforts to define equity have focused on horizontal and vertical equity. The core of horizontal equity was the "equal treatment of equals" principle. That required equal per-pupil revenue among state school districts.⁵⁰ Fiscal neutrality, or "equal yield for equal effort," was another principle defining fiscal equity. Relating per-pupil wealth and revenues of local districts, fiscal capacity variance was also an

important standard for measuring equity. Fiscal equity demanded that a student's access to educational revenues should not differ substantially among localities.⁵¹

Most equity research has been based on the analysis of input measures, most notably, funding. However, the measurement of outcomes such as test scores, graduate employment rates, and percentage of college entrants was an area of increasing interest to researchers and the public.⁵²

School finance equity measurement has focused on input variables because output and process variables were often difficult to utilize. Process measures such as school time use, grouping practices, teaching quality, and course content have also been part of the equity discussion. However, a lack of conclusive evidence existed linking expenditure and educational outputs.⁵³ Determining quality of access to education has also been a focus. Support for process equity has been based on the belief that schooling quantity and quality affect educational outcomes.⁵⁴

This section offered an overview of the theory of fiscal equity as well as fundamental equity principles. The next section will focus on the foundation method of fund distribution.

Foundation Method of Fund Distribution

In a foundation program of financing public education, the state and the local districts formed a financial partnership to provide each child the required minimum educational program. The state formed a partnership with each school district to finance the required program cost, but each local district had the discretion to fund additional programs. Local districts contributed to this base level through the required local effort determined by the state. The foundation plan was based on each district's ability to pay for a minimum educational program.⁵⁵

Background

Strayer and Haig's foundation formula was based on a conceptual model that addressed four key points: (1) the wealthiest district was used as the base for determining the minimum educational program to be provided throughout the state, (2) local tax initiatives were encouraged, (3) efficiency was rewarded, and (4) districts became fiscally competitive regardless of local ability to pay.⁵⁶

The foundation concept incorporated the ideal that all students, regardless of their geographic location, were entitled to receive a minimum level of educational services. This concept was the origin of the term "minimum foundation program." An absolute foundation program had a guaranteed minimum per-unit funding amount, a uniform local tax effort, and the capability for school districts to generate local leeway funds.⁵⁷

In the foundation plan, the guaranteed level of funding corresponded to the states' minimum educational standards or a plan that included "all the activities the state wishes to assure the communities of least ability to support schools."⁵⁸ In actuality, this guaranteed level of funding was a function of politics governed more by available revenue than by a rational determination of educational needs and costs.⁵⁹

The researchers who developed the foundation program believed it necessary to allow the generation of local leeway funds. Their belief was that local discretionary millage fostered local control and encouraged innovation of educational programs.⁶⁰ Mort identified such communities as "lighthouse districts" that would encourage other local communities to follow their leadership. However, the lighthouse concept failed because of the problems associated with extreme variances in the fiscal capacities of local school districts.⁶¹

The revenue generated by optional local levies added to the base foundation level and satisfied liberty goals. The foundation level of funding satisfied the goals of equalization. Advocates contended that local levies encouraged innovation and efficiency without jeopardizing the state-defined levels of adequacy.⁶²

As proposed by Strayer and Haig, required local effort was set so that the foundation level was met by local money in the wealthiest district. The state then leveraged property taxes to create the funding base. However, state legislatures have been reluctant to restrict any district state aid. In practice, the state implementation of this plan had disequalizing effects because (1) the required local effort was reduced if the foundation guarantee was maintained at a high level, (2) wealthy districts in states with a combination foundation/flat grant plan received substantial state funding, and (3) local effort specified in regulations was not required in 19 states causing spending disparities within the foundation amount.⁶³

The level of fiscal equalization in a foundation program was affected by the percentage of state funds provided for the entire state and the extent of the local required effort. The level of fiscal equalization tended to be directly proportional to the percentage of total state and local revenue. When the state share of total state and local revenue was high, the level of fiscal equalization was also relatively high. Conversely, low state and local revenue totals translated to a low level of fiscal equalization.⁶⁴

The required local effort also affected the fiscal equalization of the foundation program. When the required local effort was set high relative to total local effort, the revenue from local discretionary millage was restricted, which reduced the variance in per-pupil revenue among school districts.⁶⁵

Minimum foundation plans held political appeal because they assured a minimum amount while allowing local control. These schemes assured a reasonable educational program in all districts despite economic circumstances. Competition was built into the formula allowing districts to exceed minimums and reduce the local tax effort.⁶⁶

Basic Formula for Foundation Plan

The basic formula for the foundation plan was the cost of a minimum program minus the legislatively determined local share equaled the state's share. The mathematical foundation formula was

$$S_i = (P_i \times F_{state}) - (Val_i \times r_{state})$$

where S_i was the state aid to the i district, P_i was the sum of the number of students in the state calculation for the i district, F_{state} was the foundation dollar-per-pupil expenditure set by the state, Val_i was the assessed valuation for the i district, and r_{state} was the tax rate set by the local district.⁶⁷

Foundation plans are currently the preferred method by a majority of the states for financing public education.⁶⁸ Forty states currently employ some form of foundation program to support public education.⁶⁹ Most of these states permitted districts to apply a locally determined millage rate to generate funds beyond the foundation level guaranteed by the state. The effects may be disequalizing, despite the state limitations and restrictions on the amount and use of these funds.⁷⁰

Two-Tiered Foundation Plans

Several states implemented a two-tiered foundation system for distributing state funds. This program built on the first tier foundation program by assuring that a minimum program was provided by the local school districts. In the second tier, the

additional discretionary funds levied by districts were separately equalized by the state. A resource accessibility program of either a guaranteed tax base (GTB) or guaranteed yield (GTY) was equalized at the second tier.⁷¹

The GTB and GTY models were also based on the concept of equalizing educational opportunity through state support inversely proportional to each district's ability to pay. In the GTB system, the tax base amount was determined that was equally guaranteed to each district. The plan assured each district a given minimum revenue per-pupil at each property tax rate. A district's state aid equaled the difference, if positive, between the revenues it would raise at its tax rate if it had the state guaranteed tax base per-pupil and the revenues it actually raised at that rate. The local district determined local expenditures and set the local tax rate. The plan promoted wealth neutrality.⁷²

The GTY was similar in operation to the GTB with one exception. The state set the tax yield level for all property in the state. The GTB and GTY modeled advanced pupil funding equity since a certain level of funding proportional to educational needs was guaranteed, given the local tax effort. Taxpayer equity was promoted since each mill of tax effort resulted in the same levy per-pupil. Two-tiered programs have allowed states to improve both pupil equity and taxpayer equity.⁷³

These deficiencies impacted equity and disrupted the balance between the state and local effort intended by the foundation plan. The tension created by discretionary millage on per-pupil expenditures impacted equity. Thompson, Wood, and Honeyman characterized the problem as "perplexing."

If the state equalizes local leeway, the scheme is no longer a minimum foundation. If it fails to equalize discretionary millage, it restores the inequality it first sought to eliminate. If the state does not permit discretionary millage, the minimum concept is again thwarted. Political and substantive realities further apply in that it is easier to generate

support for additional millage in wealthy districts. Thus, the formula is irresolubly imperfect because any unaided discretionary millage is disequalizing, while minimum intent is violated if local leeway is denied. The only other option is to limit the amount of discretionary millage, but it is clear this is compromising and a depressant to the lighthouse concept.⁷⁴

Minimum foundation programs were popular due to their political and substantive benefits. These programs allowed states to control costs while offering local control. Front-end equality of expenditures advanced equity and financial aid was in inverse relationship to ability to pay.⁷⁵

Despite these benefits, foundation programs had three fundamental problems. First, the basic foundation formula did not equalize above the minimum tax rate. Second, poorer districts spent less if the district's voters did not approve additional millage. Third, spending was still less if poor districts approved additional tax levies because the yield per mill above the minimum was not equalized.⁷⁶

The foundation program played an important role in encouraging the states to assume greater fiscal responsibility for funding public schools. Higher levels of fiscal equalization were also an outcome of implementing foundation programs. However, fiscal litigation continued to pressure state administrations and legislatures to develop state finance systems with high levels of fiscal equalization that provided adequate systems of public schools and controlled the growth of state and local revenue for public schools.⁷⁷

Schools in Florida were funded through a minimum foundation system. The state did not equalize all funds generated locally through the application of discretionary millage. The focus of this research was the extent of disequalization caused by the revenues raised through this discretionary effort in Florida.

This section included a discussion of the foundation model of fund distribution, an explanation of the basic formula, and advantages and disadvantages of the model. An overview of the FEFP, including the history, an explanation of how the FEFP was calculated, major components of the FEFP, and data on FEFP enrollment and expenditures are presented in the next section.

FEFP Overview

Florida law guaranteed an equitable state school finance program. The Florida Education Finance Program was created by the Legislature in 1973 to

... guarantee each student in the Florida public educational system the availability of programs and services appropriate to his or her educational needs which are substantially equal to those available to any similar student not withstanding geographic differences and varying local economic factors.⁷⁸

The FEFP was a series of procedures, formulas, and mechanisms devised to allocate state funds to the 67 school districts, reimburse districts for certain expenditures they incurred, control the spending levels and tax rates of school districts, and regulate how districts spent revenues. The goal of the FEFP was to promote equalization of educational funding and spending. This goal was achieved by factoring into the FEFP a district wealth equalization scheme and making adjustments in funding based on students' needs and geographic costs.⁷⁹

District wealth equalization was a plan to equalize the availability of, or access to, basic educational resources and revenues among the 67 districts in the state. Not all school districts had the same capacity to fund their basic educational system due to differing tax bases or potential revenue sources. Consequently, some districts generated different levels of revenue for equal tax effort. Some districts had high levels of potential

local revenue per student while other districts had low levels. Districts with low-wealth, or assessed property valuation, had limited potential revenue to spend for education unless local tax rates were increased. The FEFP was an attempt to reduce disparities in potential revenue by establishing minimum and maximum levels of revenue that districts had available to spend on education.⁸⁰

The FEFP also adjusted funding based on student needs and differing costs. Adjustments addressed varying costs of providing a similar level of educational services due to differences in student population and geography. The FEFP made provisions for special education students in 1996-1997 through weight factors that provided additional funding. Wage scales and cost of living differences were also calculated in the FEFP formula. In addition to the basic component of the FEFP, the equalizing foundation formula, the state provided categorical funding and special allocations to fund specific educational needs in the school districts.⁸¹

History of the FEFP

The funding of schools became an issue in 1845 after Florida began its statehood. An amendment to the Florida Legislatures School of Law in 1851 included a provision intended to address both adequacy and equity.⁸² This law, mandating the legislature provide state funding for each child if the school district was unable to yield a certain level (two dollars per child), provided Florida's first educational equalization system.⁸³ The issue of equitable funding was addressed in the School Law of 1853 by mandating that the state fund schools by the number of students residing in the district rather than by the number of students enrolled in schools.⁸⁴

These laws were an attempt to address the issue of equity. However, school funding during this time was not adequate to meet basic needs in the school districts. The funding problem was exacerbated by the Civil War when educational funds were redirected to the war effort and schools were closed.⁸⁵

In 1893, the Florida legislature passed an act that required state funding for education to be distributed to each district in proportion to the average attendance in each district.⁸⁶ A 1924 report to the governor from the state superintendent of schools observed the unequal distribution of wealth between districts and the consequent effect on poorer districts to maintain their schools without additional state aid.⁸⁷

In 1927, adequacy and equity in Florida school funding was addressed again.⁸⁸ The state legislature increased the state property tax and levied a gasoline tax with the proceeds reserved for education. Funds generated were appropriated to the districts with one-half cent distributed to districts on the basis of average daily attendance and the other one-half cent set aside to deal with equity concerns. However, these additional funds did not provide adequate funding for the poorer districts to meet the state statute of remaining open for a minimum 120-day term.⁸⁹

In 1929, an educational survey team commissioned by the legislature and led by George Strayer, determined that the school funding inequity was an outcome of the way Florida school districts were determined.⁹⁰ The primary reason was the constitutional requirement that funds be expended in the districts in which they were generated. The recommendations made by Strayer's commission to address equity were not enacted by the legislature until 1945.⁹¹

The Florida Code was implemented in 1939 as an equalizing mechanism for school funding. This scheme provided aid to smaller schools in greater proportion than larger schools.⁹²

The State Foundation Fund was enacted by the Florida Legislature in 1945 to allay inequities created by the wealth differential among school districts in the state. The educational needs of the students and the tax paying ability of the districts were provided for in this plan.⁹³ The State Foundation Fund evolved into the Minimum Foundation Program (MFP) in 1947, which was developed by Roe L. Johns from the University of Florida and Edgar Morphet from the Florida Department of Education.⁹⁴ The MFP had two equalizing provisions. One was the redistricting of schools according to county lines with the requirement that funds generated within a county be used for all schools within that county.⁹⁵ Required local effort (RLE) was the second provision. RLE was calculated by multiplying the county's portion of the total state assessed property value by the yield of a six-mill tax on all nonexempt property in the state. The required local effort figure was then subtracted from the state calculated cost of the minimum foundation program for the district. Counties were allocated state aid in terms of the difference needed to provide the minimum foundation level of funding determined by the state. Educational funding in Florida was substantially equalized by this calculation.⁹⁶ This section was an overview of the history of the Florida finance plan. A brief explanation of the calculation of the 1996-1997 FEFP formula follows.

FEFP Calculation

The distribution of educational dollars in Florida was calculated in three major phases. The product generated from the first phase of the formula, state and local FEFP

dollars, was used to calculate the second phase, the net state FEFP allocation. This product was used in the third phase to determine the total state allocation for the support of public school education.⁹⁷

The first phase involved calculating the state and local FEFP dollars. Florida Statutes governed the calculation of the basic unit of the formula, which was the full time equivalent (FTE). Twenty-five hours of instruction per week was considered one FTE. The core calculation was the number of full-time equivalent student membership (FTE) of each specific program of education by the program cost factors assigned by the Legislature. These weighted FTEs were then multiplied by the base student allocation. Each district projected the number of FTEs to be served in each program area. The Florida Consensus Estimating Conference also estimated the number of FTEs to be served. This annual estimate was used as a basis for determining the enrollment funded by the Legislature in the Appropriations Act. A district cost differential was applied to the weighted FTE to adjust district funding for the relative costs of living in various districts. The district's base funding was the product of the weighted FTEs multiplied by the base student allocation times the district cost differential. To this base funding, supplemental allocations were added contingent on district eligibility. These allocations included supplements for declining enrollment, sparsity, safe schools, remediation reduction incentive, discretionary tax equalization, hold harmless adjustment, and disparity compression adjustment. The total amount of state and local dollars for which the district was qualified was the result of supplements being added to the base funding.⁹⁸

The second phase involved calculating the net state FEFP allocation. The required local effort was then subtracted from the total amount of state and local dollars,

resulting in the state FEFP contribution to each school district. Further adjustments were made resulting in the net FEFP allocation to the district.⁹⁹

The third and final phase of the calculation involved adding the other educational revenues provided by the state, in addition to the FEFP, including discretionary lottery funds, categorical program funds, and special allocations. The total state finance program was the sum of the net state FEFP allocation and these additional state appropriations that were separate from the FEFP.¹⁰⁰

Major Components of FEFP

The Florida Legislature determined annually the amount of funds to be distributed to the school districts. A total amount of over \$5 billion was appropriated in 1996-1997 for distribution to districts through the FEFP.¹⁰¹ The number of FTEs to be served was projected by the Florida Consensus Estimating Conference and used as a basis for the enrollment funded by the Legislature in the Appropriations Act. This FTE student count was developed for each of the educational programs specified in the FEFP and multiplied by the program cost factors.¹⁰²

Differences in educational costs were recognized and specific cost factors were set for certain grade levels and programs. Additional resources were provided for students in certain grade levels and programs based on their instructional needs. The cost factors were produced by the Department of Education based primarily on a three-year average cost per FTE for each of the programs.¹⁰³ The cost of an FTE for the basic program in grades 4 through 8 was a base cost factor with a value of 1.00. In 1996-1997, cost factors ranged from .802 for Adult Basic Program to 17.069 for the part-time

program for the visually handicapped.¹⁰⁴ This system of unequal treatment of unequals addressed the problem of vertical equity.

The base student allocation (BSA) was set by the Legislature in the General Appropriations Act. The BSA for the 1996-1997 fiscal year was \$2,912.14.¹⁰⁵ The allocation for each district was the product of the BSA multiplied by the weighted FTE in each program. This product was the base level of funding necessary for a minimum education for the foundation program. Adjustments could be made to this base level of funding to accommodate differing financial circumstances in the local districts. These adjustments included the district cost differential, the declining enrollment supplement, and the sparsity supplement.¹⁰⁶

The district cost differential (DCD) was used to adjust district funding for the relative cost of living in each county. DCDs were computed by the Department of Education by averaging the three most recent years of the Florida Price Level Index. To determine base FEFP funding, DCDs were applied to the product of each county's weighted FTE and BSA. In 1996-1997, the DCD ranged from a low of 0.9023 in Calhoun County to a high of 1.0913 in Monroe County.¹⁰⁷

The declining enrollment supplement was provided to districts that experienced a decline in enrollment from the previous year. This supplement assisted with fixed costs that continued even though fewer students were served. Eligibility for the supplement was determined by comparing the prior year FTE with the current year. In eligible districts, 50% of the decline was multiplied by the prior year FEFP per unweighted FTE and added to the current year allocation. In 1996-1997, this supplement was allocated to eight districts and totaled \$620,680.¹⁰⁸

The sparsity supplement was designed to compensate small, geographically dispersed rural districts that faced extra costs in providing the same educational services as large, concentrated districts. For example, sparsely populated districts usually had difficulty generating funds to cover the cost of exceptional education, but were required by federal and state laws to serve such students. Eligibility was limited to districts with an unweighted FTE of 19,000 or less, and each eligible district's supplement was adjusted for the relative wealth of the district. A total of \$20,000,000 was distributed to 35 districts in 1996-1997 through the sparsity supplement.¹⁰⁹

The safe schools allocation was appropriated to districts to provide after school programs for at-risk students, security programs, and alternative school programs. These funds were based on weighted FTEs and adjusted using a Florida Department of Law Enforcement Crime Index. In 1996-1997, \$50,350,000 was distributed to all 67 districts.¹¹⁰

The remediation reduction allocation compensated districts for reducing the number of students needing remediation in the core subjects of math, writing, and reading. This incentive was allocated in two parts. The first part, \$20 million, was based on each district's share of the state total number of students who passed one or more subtests of the college placement test. The second part of the allocation, \$10 million, was based on each district's enrollment in levels one, two, and three of math and English courses. Each district's allocation was determined by the number of students enrolled in level one courses divided by the state totals level one enrollment. That quotient was multiplied by \$2.5 million and by -1. The number of students enrolled in level two and three courses was divided by the state total enrollment in level two and level three courses. That quotient was multiplied by \$7.5 million. Each district's total remediation

reduction incentive allocation was the sum of its placement test amount, its math course enrollment amount, and its English course enrollment amount.¹¹¹

The discretionary tax equalization was a supplement allocated to eligible districts. Districts that levied the discretionary 0.51 mill and an additional 0.25 mill received a supplement if the additional 0.25 mill raised less than \$50 per FTE. The state provided an amount to the eligible districts to ensure that each district received \$50 per FTE when combined with the amount raised by the 0.25 mills. In 1996-1997, 44 of the 67 districts received approximately \$11 million funds for discretionary tax equalization.¹¹²

The hold harmless adjustment was made to ensure that districts did not receive less funding per weighted FTE than the previous year. The Legislature implemented this adjustment to guarantee that each district received a minimum percentage of increase in per weighted FTE funding regardless of enrollment growth. In 1996-1997, this adjustment was required for 32 districts and a total of \$12.5 million was allocated.¹¹³

The disparity compression adjustment was made to reduce the range of the discrepancy of funds among districts created by the district cost differential adjustment. This adjustment provided additional funding for districts that would otherwise receive less than the state average total potential funding amount per unweighted student. Each district's total potential funding was then divided by its unweighted enrollment. An amount was calculated for each district that was the amount necessary to raise its per student funding to a level equal to one standard deviation below the mean or an amount was calculated for each district that was the amount necessary to raise its per student funding amount 10% closer to the state averages. This adjustment had a total allocation of almost \$33 million and was distributed to 34 eligible districts.¹¹⁴

The state also provided educational revenues in addition to the basic foundation funding. These appropriations included discretionary lottery funds, categorical program funds, and special allocations. In 1996-1997, over \$463 million in district discretionary lottery funds were distributed to the districts in proportion to their base FEFP funding levels (weighted FTE x BSA x DCD). Categorical programs for 1996-1997 included Comprehensive School Construction and Debt Service, School Lunch Match/Breakfast Supplement, Instructional Materials, and Student Transportation. The total amount distributed in 1996-1997 for categorical programs was about \$390 million. Special allocations included K through 8 Summer School, Blue Print for Career Preparation, Pre-School Projects, Public School Technology, Class Size Reduction, Innovative Practices, Full Service Schools, HIV/AIDS Education, Cities in Schools, and Performance Based Incentives. The total amount distributed for special allocations in 1996-1997 was approximately \$880,000. These categorical programs and special allocations were listed but not discussed in detail because they were not included in the analysis of this research study.¹¹⁵

The total state and local FEFP dollars available to the district were the result of the addition of supplements, incentives, and adjustments to the product of the weighted FTE and the BSA. The amount calculated for the district required local effort was subtracted from the state and local FEFP dollars resulting in the state's share of FEFP dollars, which was \$8.1 billion in 1996-1997.¹¹⁶

This state FEFP amount was subject, by the Department of Education, for prior year adjustments. These adjustments were allocated for adjudication of litigation, arithmetical errors, assessment roll change, full-time equivalent membership errors, or audit errors. The foundation component of FEFP was comprised of the net state FEFP funds and the required local effort.¹¹⁷

FEFP Summary

Sixty-seven school districts existed within the state of Florida congruent geographically with the 67 counties in the state. Each school district was governed by an elected local school board that had the authority to levy discretionary tax millage.¹¹⁸

The unweighted full time membership enrollment reported in the state in 1996-1997 was 2,372,889.98.¹¹⁹ Although national school enrollments have declined over the past three decades, enrollment in Florida schools steadily increased.¹²⁰ Funding for Florida public schools also increased during this same time period, as indicated in Table 2-1.

Table 2-1. Florida/National Enrollment & Florida Education Funding

Year	Florida Student Enrollment	National Student Enrollment	Florida Total School Expenditures
1970	1,312,693	41,934,376	\$961,273,000
1980	1,464,461	38,288,911	\$2,766,468,000
1990	1,646,583	37,778,512	\$8,228,531,000
1997	2,372,890		\$13, 014, 989,440

Source: 1996-1997 Florida Education Finance Program: National Center for Educational Statistics

The school districts in Florida served over 2.3 million full-time equivalent students and received over \$13 billion in funding during the 1996-1997 school year. Over 60% of all school funding was generated through the FEFP. The remaining 38% was the sum of federal, state, and local dollars combined with funds raised through capital debt service¹²¹ (Figure 2-1). The FEFP totaled \$8.1 billion in 1996-1997. Fifty-nine percent was state funding, and 41% was local effort.¹²²

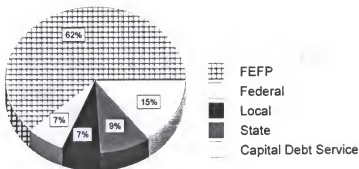


Figure 2-1. Florida Education Funding Sources 1996-1997
Source: Florida Department of Education

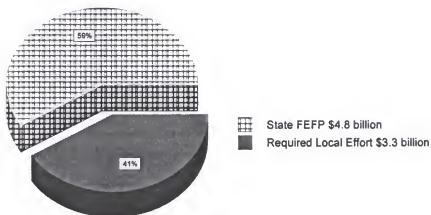


Figure 2-2. Florida: State FEPP/Local Effort 1996-1997
Florida Department of Education

The previous section was an overview of the FEFP, including the calculations, the major components, and a financial summary of the enrollment and expenditure data in the Florida finance system during the past three decades. The next section is a review of Florida's school property tax.

Florida's Local School Property Tax

Taxation of property was the local revenue source used to support Florida's public schools. The Florida Constitution gave authority to local school districts to tax property in support of education.¹²³ Each of the 67 school districts in Florida was a countywide district. Seven types of tax levies supported public education in Florida in 1996-1997.

The first type, required local effort (RLE), was established in the FEFP. The millage was adjusted yearly, required local school board approval, and was equalized by the state.¹²⁴ The second type, discretionary current operating, could be levied up to 0.510 mills, was optional, required local school board approval, did not require the vote of the electorate, and was not equalized by the state.¹²⁵ The third type, a special school operations/capital outlay millage, did not have a fixed millage amount, was optional, required local school board approval and the vote of the electorate, and was not equalized by the state.¹²⁶ The fourth type, capital outlay/maintenance, could be levied up to 2.0 mills, required local school board approval, did not require the vote of the electorate, and was not equalized by the state.¹²⁷ The fifth millage type, supplemental discretionary, was fixed at 0.25 mills, was optional, required local school board approval but not the vote of the electorate, and was equalized by the state.¹²⁸ The sixth type, debt service, was

optional, required local school board approval and the vote of the electorate, and was not equalized by the state.¹²⁹ The seventh type, sales surtax/capital outlay, could be levied up to 0.5 mills, was optional, required local school board approval and the vote of the electorate, and was not equalized by the state.¹³⁰ Table 2-5 outlines information pertinent to these levies.

Districts were prohibited by the Florida Constitution from exceeding the rate of 10 mills a year on the nonvoted levies by the electorate; i.e., required local effort, discretionary current operating, supplemental discretionary, and capital outlay/improvements/ maintenance.¹³¹ In addition, only two of the school levies, the required local effort and the supplemental discretionary levy, were equalized by the state.

The Legislature set the required local effort from ad valorem taxes for 1996-1997 in the amount of \$3,521,214.060 in the Appropriations Act. The Commissioner of Education then computed and certified the required local effort millage rate for each district.¹³²

Each district's deduction for required local effort was computed and certified by the Commissioner of Education using Department of Revenue tax rolls. The required local effort was the product of the certified mills times 95% of the taxable value for school purposes of the district. The Commissioner had the authority to adjust required local effort millage rates if the millage produced an amount greater than 90% of a district's total FEFP entitlement.¹³³ In 1996-1997, the certified millage rates of two districts were reduced by this provision.¹³⁵ An equalization factor was then applied to the amount produced by applying the average computed required local effort millage rate of 6.622 to the certified tax roll. This adjustment was intended to offset variations between districts in the level of appraisal of property.¹³⁴

Table 2-2. Florida School Levies 1996-1997

Type	Required/ Discretionary	# Mills	# Years	Voted/ Nonvoted by Electorate	Approval Required by:	Equalized by State
1. Required Local Effort (RLE)	Required	6.622 (state calculates)	Annual	Nonvoted	Approved in FEFP School Board	Yes
2. Discretionary Current Operating	Discretionary	Up to 0.510 maximum	Annual	Nonvoted	School Board	No
3. Operating/Capital Outlay	Discretionary	No fixed amount	Not to exceed 2 years	Voted	School Board & Electorate	No
4. Capital Outlay/ Improvements/ Maintenance	Discretionary	Not more than 2.0	Annual	Nonvoted	School Board	No
5. Supplemental Discretionary	Discretionary	Up to 0.25 maximum	Annual	Nonvoted	School Board	Yes
6. Debt Service	Discretionary	No Limit	20 Years (range of years depends on bond indenture)	Voted	School Board & Electorate	No
7. Sales Surtax/ Capital Outlay	Discretionary	Up to 0.5	Annual (set for an approved time by language in referendum)	Voted	School Board & Electorate	No

Source: Fl. Const. Art. VII 9 (b), s. 200.001(3) F.S., s. 236.25(2) F.S., s. 236.02(6) F.S. FL Department of Ed.

The millage rate was computed based on the difference of each district from the state average assessment level. The millage rate resulting from the application of this equalization factor was added to the state average RLE millage. The certified RLE millage rate was the aggregate of these two rates.¹³⁵

Local effort also included an amount for fees of students enrolled in adult general and vocational adult programs who were reported for funding through FEFP but were not exempted by law. Required local effort and discretionary tax amounts applicable to developmental research schools were provided from state FEFP funds since these schools had no taxing authority. These developmental research schools were provided the same dollar amount per student as was generated for district students by the tax base of the district in which the school was located.¹³⁶

Local school boards had the authority to levy up to 2.0 mills for capital outlay and maintenance without voter approval. Florida statutes governed how these levies could be used. The revenues were restricted to new construction and remodeling, sites and site improvement or expansion to new sites, existing sites, auxiliary facilities, and athletic facilities or ancillary facilities. These revenues could also be used for maintenance, renovation, and repair of existing school plants or of leased facilities; new and replacement of equipment; and school buses, driver education vehicles, security vehicles, and vehicles used for maintenance or operation of plants and equipment. Payments for lease purchase agreements for educational facilities and sites were permitted if the amount did not exceed one-half the proceeds of the millage levied under this authority. The revenue could also be used for loan payments for specific types of school facilities identified by Florida Statutes. These proceeds could also be used to pay costs associated

with complying with state and federal environmental statutes, regulations governing school facilities, and payment of costs of leasing relocatable educational facilities.¹³⁷

The required local effort and supplemental discretionary millage were the only local millage rates equalized by state funds. The other local levies were not equalized throughout the state. This study focused on the three, nonvoted discretionary types of millage; current operating, capital outlay/maintenance, and supplemental discretionary.

The focus of this section was Florida's local school property tax. The following section is a review of previous research studies conducted on the equity of the FEFP.

FEFP Equity Studies

Various studies have been conducted to analyze the equity of the Florida Education Finance Plan since its inception in 1973. Vaughan investigated the degree to which inequalities in the distribution of educational revenues existed before and after the implementation of the FEFP. Vaughan also examined the degree to which the level of revenues available for education compared to district wealth prior to and after the implementation of the FEFP. Vaughan found that the interdistrict distribution of per-pupil revenues was relatively equitable after FEFP implementation. Vaughan also established that although the original Florida educational finance system was not highly wealth neutral, wealth neutrality increased after implementation of the FEFP.¹⁴⁰

Carroll and Park studied the interdistrict fiscal equity of the FEFP with the previous distribution system implemented under the Minimum Foundation Program (MFP). These researchers concluded that greater disparities resulted after the implementation of the FEFP, including per-pupil revenue availability and instructional

expenditures. Carroll and Park found that the cost adjustment factor in the FEFP formula caused the program to be less fiscally neutral and favored the larger and more urban districts to a greater degree than the relatively smaller and less urban districts. School districts with higher poverty derived the greatest benefit from the FEFP plan when compared with the MFP.¹³⁸

Shiver compared the differences between the FEFP and the MFP to determine distributional equality. He studied the relationships between total state revenues per-pupil, local tax rate, assessed value and personal income per-pupil, vocational and exceptional educational factors, and the district cost differential (DCD). He concluded that, under the FEFP, the range of district revenues increased the relationship between pupil wealth and state and local revenue, per-pupil had strengthened, and that the relationship between state and local revenue per-pupil and district property wealth per-pupil remained constant. Shiver found no evidence to indicate that the FEFP had achieved greater fiscal equalization. The data suggested that the FEFP had actually reduced the equalization effects among school districts.¹³⁹

Honeyman studied state funding mechanisms and contributed to the body of research that addressed the concepts of adequacy and equity and extended the doctrine of fiscal neutrality to school facilities as well as educational programs. Cumulative research analysis established the relationship between wealth and facilities and indicated that equity may be applied to capital outlay. Honeyman found the financing of facilities by school districts to be problematic, particularly for rural and poor school districts that lacked the adequate tax base to support the levels of debt needed for school maintenance and construction. Florida funded local district capital outlay reserves on a per-unit basis as part of the state funding formula. According to Honeyman, the manner in which

school districts budgeted and funded capital outlay and the extent to which funds were dependent on approval by school boards and taxpayers could have disequalizing effects.¹⁴⁰

Stark, Honeyman, and Wood examined the interdistrict effects of the Florida Lottery on the state finance system for the year 1989-90. The results of this equity analyses indicated that the FEFP was basically equitable for the year studied. However, the inclusion of lottery funds impacted the equity of the system in certain districts. Equity was increased for districts clustered around the mean level of funding and decreased for districts below the mean. The fiscal neutrality of the FEFP was relatively unchanged by the inclusion of lottery funds. The results of the study also indicated that lottery funds were not used according to the legislative requirement that net proceeds of the lottery be distributed equitably.¹⁴¹

O'Loughlin, Wood, and Honeyman studied the effects of the sparsity supplement of the FEFP formula on interdistrict per-pupil equity for the year 1989-90. The sparsity supplement was found to reduce the inverse relationship between the distribution of funds to the relative property wealth of districts. Their study concluded that, although the basic part of the FEFP remained relatively equitable, adding supplements, discretionary dollars, and categorical supplements had disequalizing effects on the distribution system. Their study concluded that the discretionary levy had the most disequalizing effect.¹⁴²

Currie studied the relationship of the equity of total capital outlay revenues relative to the equity of general educational expenditures and the relationship of the equity of the state and local components of capital outlay and total capital outlay revenues relative to each other for public K-12 education in Florida for the year 1988-89.

The results indicated that measures for general educational expenditures indicated greater horizontal equity and greater wealth neutrality than measures for total capital outlay revenues. Currie also found evidence that the lack of wealth neutrality in total capital outlay revenues was explained by a strong lack of wealth neutrality in the measures for local capital outlay revenues. This lack of wealth neutrality was largely unmitigated by the wealth neutrality for measures of state capital outlay revenue, despite additional aid to some low-wealth school districts.¹⁴³

Summers examined the effects of the Florida Education Lottery on the available resources and actual expenditures of the 28 state-supported community colleges in Florida. The study provided evidence of an inverse relationship between lottery dollars and total community college expenditures, that supplantation effects were influenced by redistribution, that community colleges were shown to have been increasingly dependent on nonstate sources of revenue since the inception of the Florida lottery in 1987, and that there was evidence that the extent to which the lottery allocation was a categorical award was positively correlated with the size of the state allocation.¹⁴⁴

Maiden and Wood analyzed the cumulative disequalizing effects of unequalized local discretionary funding as part of the FEFP for the year 1992-93. The study focused on the effects of discretionary millage and school capital improvement millage, both nonvoted millage rates, when combined with the equalized foundation portion of the FEFP. Both the discretionary revenues and capital outlay and maintenance resulted in disequalizing effects on interdistrict resource accessibility and decreased interdistrict wealth neutrality. The study results indicated that the revenues generated through the capital outlay and maintenance source had a more significant disequalizing effect on the distribution than revenues produced through the discretionary levy.¹⁴⁶

Chambers examined the effects of additional revenues from capital outlay transfers on the equity of the FEFP for the year 1994-95 by analyzing the equity in the general fund before and after capital outlay transfers into the general fund. The results of the study indicated that capital outlay transfers decreased equity in the distribution of funds among Florida's districts and made the state finance system less wealth neutral.¹⁴⁷

Sutton investigated the effects of additional revenues for exceptional student programs, in the form of weighted program cost factors, on the equity of the Florida school finance system for the year 1995-96. The results of this study indicated changes in the variation in the distribution of revenues per pupil per district as groups of weighted program cost factors were added to the FEFP. Measures of fiscal neutrality indicated a lack of a relationship between the property wealth per pupil per district and revenues per pupil per district. The relationship between the property wealth per pupil and revenues per pupil did not change as weighted program cost factors were added to the FEFP.¹⁴⁸

Brown analyzed the effects of performance-based funding on the equity of the Florida community college system by comparing equity before (1994-95) and after (1996-97) performance-based funding was implemented. The results indicated that the degree of equity was better prior to the implementation of performance-based funding. The degree of equity for the funding formula decreased slightly when the performance-based allocation was added to the funding formula. Brown also projected that the degree of horizontal equity would be greatly decreased when the performance based allocation reached 25% or higher of total revenue.¹⁴⁹

Nakib studied resource allocation and use in Florida in and found a high level of interdistrict equity. This study also showed that there was no significant variation in district levels of spending when levels of fiscal 1991-92 expenditures were compared

between districts based on various frequently used predictors. The breakdown of district level of expenditures by level of property wealth showed little variation.¹⁵⁰

Owens and Maiden conducted a comparison of interschool and interdistrict funding equity in Florida for fiscal year 1991-92 to determine whether dollars that flowed through districts and schools were distributed equitably. The extent to which instructional expenditures differed between districts and between schools and subsequent effects related to the racial/ethnic composition or household income levels of students was also explored. The results of the analyses provided evidence of inequality for schools with a high percentage of low socio-economic students. The study showed that inequalities persist in the FEFP despite the legislative intent to further fiscal equity in Florida.¹⁵¹

This section was a review of equity studies on the FEFP. Finance equity finance litigation and related legal principles are the focus of the next section.

Finance Equity Litigation

Legal Principles

The courts have been the stimulus for equity changes in state public school distribution systems. Legal challenges to state school finance systems have varied. Three basic arguments have been used during school finance litigation. First, education was a fundamental right because of its impact on the economic and social structures of the state. Second, funding disparities created unequal opportunity. And third, the correlation of wealth and school expenditures caused a lack of equal protection.¹⁵²

The traditional position of the courts toward the legislative function of financing public schools has been described by Alexander, Johns, and Jordan:

Where constitutionality of a statute is questioned, all reasonable doubt will be resolved in favor of the questioned authority and the act will be declared constitutional unless it can be clearly demonstrated that the legislature did not have the power or authority exercised or that its authority was exercised arbitrarily and capriciously, for instance, as to classification or delegation of authority, to the prejudice of the rights of some of the citizens. Particularly, this is true where the act in question is...of great public concern involving the performance of an absolute duty imposed on the legislature by the basic law of the state.¹⁵³

State school finances cases have been litigated in both the state and the federal courts. Finance equity cases were generally litigated in the federal courts under the constitutional theory of equal protection clause of the U.S. Constitution. The Equal Protection Clause of the Fourteenth Amendment included the same protections as the equality and uniformity of taxation provisions of most state constitutions.¹⁵⁴

In determining the constitutionality of state school finance programs, federal courts typically focused on whether the programs created unconstitutional classifications or violated the equality and uniformity requirements of taxation. In these cases, the argument was that the funding system treated students who reside in poorer districts unfairly and that these students were deprived of an equal educational opportunity.¹⁵⁵

State school finance litigation was based on claims grounded in the legal principle of equal protection, the state's educational article, or both. These cases were based on the common assumption that a strong correlation existed between expenditures and the quality and quantity of students' educational opportunities.¹⁵⁶

The earliest legislation on school finance, from 1912-1964, involved tax uniformity. The usual issue was whether it was imperative for the legislature to disburse tax revenues equally to all districts after an equalizing assessment. Courts typically ruled that the state was free to distribute the taxes as it chose.¹⁵⁷ Prior to the cases in the early

1970s, several state courts made decisions that would influence future cases of equity legislation.

The legal principles involved in early litigation were based on tax uniformity, and the focus was on the equal protection clause of the Federal Constitution. However, efforts in federal courts to invalidate state school finance systems failed. The courts found that the equal protection provision of the Fourteenth Amendment did not extend to disparities in educational funding, that education did not enjoy the status of a fundamental interest, that fiscal disparities did not create a suspect class based on wealth, and that the lack of a judicially manageable standard with which to measure educational need created a problem.¹⁵⁸

Thro characterized present day judicial activity in school finance as occurring in three waves. In the first wave from 1971 to 1973, plaintiffs alleged violations of the equal protection clause of the U. S. Constitution. This first wave of court challenges was largely unsuccessful because of the lack of a “justifiable standard” and because of the plaintiff’s defeat in the landmark San Antonio Independent School District v. Rodriguez¹⁵⁹ case on school finance equity.¹⁶⁰

During the second wave of litigation from 1973-1989, reformers turned to state courts and focused on the state education article, the equal protection clause, or both provisions of state constitutions to invalidate inequitable school finance schemes. The results of court decisions during this period were mixed. Several school finance systems were invalidated due to the disequalizing effect funding disparities created by systems relying heavily on local property taxes for revenue. Equal educational opportunity was found to be a fundamental interest that subjected the state systems to the strict scrutiny standard of judicial review. The courts established the judicially manageable standard of

fiscal neutrality. This new judicial activism motivated states to modify their school finance plans in an attempt to make them more equitable. Additional funding was also raised to counteract the disequalizing effects of local funds raised from property taxes. This litigation indicated the impact of the courts in leveraging improvement focused on equity and adequacy.¹⁶¹

The third wave of school finance cases began in the late 1980s when the public school funding systems of several states were found to be unconstitutional by their state courts. The supreme courts in Kentucky, Texas, Montana, and New Jersey made pivotal rulings that redefined the constitutionally required level of education a state must provide from a minimum to a quality education and relied on both input and output indicators for measuring constitutional compliance.¹⁶²

Disparities in per-pupil funding were found to violate equal protection guarantees, and the fundamental right to an education was upheld. The court also began to review personnel, curriculum, and facilities, not just per-pupil revenues, when comparing educational opportunities.¹⁶³ The Helena Elementary School District Number 1 v. State¹⁶⁴ decision ended the third wave of judicial activity and moved the standard for the state responsibility for the provision of education from a minimum to a quality system.¹⁶⁵

Three years after the ruling in Rodriguez, the U.S. Supreme Court redefined the two-level standard, rational relationship versus strict scrutiny, to include a third “intermediate” standard. The Court said,

There are three standards generally accepted for determining constitutionality under the Equal Protection Provisions of both the U.S. and State Constitutions. (1) The rational relationship test; (2) The intermediate level of scrutiny; and (3) The strict judicial scrutiny standard. Under the rational relationship test a statutory classification is presumed valid and will comport with constitutional standards as long as it bears a reasonable relationship to a legitimate

governmental purpose. The intermediate level of judicial scrutiny requires that a classification be *substantially* related to an important governmental objective. Application of the strict scrutiny test means that the classification is not entitled to the usual presumption of validity and that the state bears the burden of proving that the classification system “has been structured with ‘precision’ and is ‘tailored’ narrowly to serve legitimate objectives and that it has selected the less ‘drastic means’ for effectuating its objectives.”¹⁶⁶

Underwood characterized three approaches to litigating finance equity cases. The first approach was based on the constitutional doctrine of equal protection. This doctrine prohibited the government from treating similarly situated individuals differently without a strong justification. According to this theory, it was argued that the practice of inequitable funding treated students who resided in poorer districts differently from those who resided in more affluent districts by allowing a disparity to exist in the funding of the educational programs.¹⁶⁷

Most courts have applied the traditional rationality standard when evaluating whether finance systems were constitutional with this standard. The state’s constitution was upheld if the classification was rationally related to a legitimate state interest. Most school finance systems were upheld under this test since it was the lowest judicial standard. The strict scrutiny standard was employed when state legislation impacted on a suspect classification to differentiate people for treatment. To be upheld, the classification must be necessary to further a compelling state interest. Generally, courts have been unwilling to use this higher standard of scrutiny in school finance cases — finding that neither property poor school districts nor students within these districts were a suspect class.¹⁶⁸ Table 2-3 summarizes reported decisions using a differential treatment theory.

The second approach to litigating finance equity cases also involved the constitutional doctrine of equal protection. However, this argument was focused on lower funding levels in poorer districts. Such disparate funding resulted in a deprivation of education to students residing in these poorer districts. The determination of a public education as a fundamental right was central to this approach.¹⁶⁹

Recent cases have indicated that deprivation of a minimal level of education triggered mid-tier scrutiny under the equal protection clause. The argument was based on the assumption that each student had the right to be provided with the opportunity to develop the skills needed to be productive and participate in the democratic process. Court decisions based on educational deprivation theory are summarized in Table 2-4.

The third theory was based entirely on the state's education clause. Central to this theory was the argument that the state legislature failed to live up to its state constitutional obligation to provide an education for all children in the state. Key to the litigation was the state education clause. Although the articles varied among the states, all emphasized the importance of education, requiring the state to provide a system of free public education. Education clauses relied on the state's constitutional history and the judiciary's method of interpretation. As indicated in Tables 2-5 and 2-6, plaintiffs met with mixed success in cases that have relied primarily on the education clause as the legal basis for action.¹⁷⁰

This section addressed the legal principles involved in equity challenges to public school financing. In the next section, the specific cases related to public school finance equity are discussed. Table 2-7 lists the cases that are included in the discussion.

Table 2-3. Equal Protection: Differential Treatment

Case	State	Year	Suspect Class	Standard of Review	Results
<i>Serrano v. Priest</i>	CA	1971	Yes, wealth of district residents	Strict Scrutiny	Reversed order to dismiss, and remanded for trial
<i>North Shore School Dist.</i>	WA	1974	No	Rational Relationship	Constitutional
<i>Thompson v. Engelking</i>	ID	1975	No	Rational Relationship	Constitutional
<i>Serrano v. Priest</i>	CA	1976	Yes, district wealth	Strict Scrutiny	Unconstitutional
<i>Washakie Co. School Dist. v. Herschler</i>	WY	1980	Yes, district wealth	Strict Scrutiny	Unconstitutional
<i>Lujan v. Colorado St. Bd. of Educ.</i>	CO	1982	No	Rational Relationship	Constitutional
<i>Bd. of Educ., Levittown v. Nyquist</i>	NY	1982	No	Rational Relationship	Constitutional
<i>Pauley v. Kelly</i>	WV	1982	Yes, various discriminatory	Strict Scrutiny	Unconstitutional
<i>Hornbeck v. Somerset Co. Bd. of Educ.</i>	MD	1983	No	Rational Relationship	Constitutional
<i>Fair School Finance Council of OK v. State</i>	OK	1987	No	Rational Relationship	Constitutional
<i>Reform Educ. Financing Inequities Today</i>	NY	1991	No Determination Made	Rational Relationship	Constitutional
<i>Tennessee Small School Systems v. McWherter</i>	TN	1993	No	Rational Relationship	Unconstitutional

Adapted from Underwood, Journal of Education Finance, 146

Table 2-4. Equal Protection: Educational Deprivation

Case	State	Year	Fundamental Right	Standard of Review	Results
Serrano v. Priest	CA	1971	Yes, Independent Analysis under State Constitution	Strict Scrutiny	Reversed order to dismiss, remanded for trial
Shofstall v. Hollins	AZ	1973	Yes, Followed Rodriguez Test	Rational Relationship	Constitutional
North Shore School Dist. No. 417 v. Kinnear	WA	1974	No, Followed Rodriguez Result	Rational Relationship	Constitutional
Thompson v. Engelking	ID	1975	No, Rejected Rodriguez Test	Rational Relationship	Constitutional
Olsen v. State	OR	1976	No, Determination Made, Rejected Rodriguez Test	Balancing Test	Constitutional
Serrano v. Priest	CA	1976	Yes, Independent Analysis under State Constitution	Strict Scrutiny	Unconstitutional
Horton v. Meskill	CN	1977	Yes, Independent Analysis under State Constitution	Strict Scrutiny	Unconstitutional
Cincinnati School Dist. v. Walter	OH	1979	No, Determination Made, Rejected Rodriguez Test	Rational Relationship	Constitutional
Washakie Co. School Dist. v. Herschler	WY	1980	Yes, Independent Analysis under State Constitution	Strict Scrutiny	Unconstitutional
McDaniel v. Thomas	GA	1981	No, Rejected Rodriguez Test	Rational Relationship	Constitutional
Levittown Union Free School Dist. v. Nyquist	NY	1982	No, Rejected Rodriguez Test	Rational Relationship	Constitutional

Table 2-4—continued

Case	State	Year	Fundamental Right	Standard of Review	Results
Lujan v. Colorado St. Bd. of Educ.	CO	1982	No, Rejected Rodriguez Test	Rational Relationship	Constitutional
Pauley v. Kelley	WV	1982	Yes, Independent Analysis under State Constitution	Strict Scrutiny	Unconstitutional
Dupree v. Alma School Dist. No. 30	AK	1983	No Determination Made	Rational Relationship	Unconstitutional
Hornbeck v. Somerset Co. Bd. of Educ.	MD	1983	No, Rejected Rodriguez Test	Rational Relationship	Constitutional
Horton v. Meskill	CN	1985	Yes, Independent Analysis Under State Constitution	Three-Part Test	Upheld Facial Validity
Fair School Finance Council of Oklahoma v. State	OK	1987	No, Rejected Rodriguez Test	Rational Relationship	Constitutional
Edgewood School Dist. v. Kirby	TX	1989	Yes, Independent Analysis under State Constitution	Fails even at Rational Relationship	Unconstitutional
Kukor v. Grover	WI	1989	Yes, Independent Analysis under State Constitution	Rational Relationship	Constitutional
Reform Educ. Financing Inequities Today (R.E.F.I.T.) v. Cuomo	NY	1991	No Determination Made	Rational Relationship	Constitutional

Table 2-4--continued

Case	State	Year	Fundamental Right	Standard of Review	Results
Idaho Schools for Equal Educ. Opp. v. Evans	ID	1993	No, Rejected Rodriguez Test	Rational Relationship	Remanded
Tennessee Small School Systems v. McWhorter	TN	1993	Yes, Independent Analysis Under State Constitution	Fails even at Rational Relationship	Unconstitutional
Committee for Educational Equity v. Missouri	MIS S	1993	Yes, Independent Analysis Under State Constitution	Strict Applicable, but fails even at Rational Relationship	Unconstitutional
Opinion of Justices	AL	1993	Yes, Independent Analysis Under State Constitution	Strict Applicable, but fails even at Rational Relationship	Unconstitutional

Adapted from Underwood, Journal of Education Finance, 148-149

Table 2-5. Interpretation of State Education Clauses: Finance Systems Found Unconstitutional

Citation	State	Year	Constitution Language	Interpretation
Pawtucket v. Sundlum	RI	1994	To promote public schools	Students have right to an equal, adequate and meaningful education, fundamental right to be provided uniformly
McDuffy v. Sec'y of the Exec. of Education	MASS	1993	Duty to cherish the interests of public schools and grammar schools	Obligation to provide an adequate education
Alabama Coalition for Equity v. Hunt	AL	1993	A liberal system of public schools	Right to equal and adequate educational opportunities which will qualify them for the responsible duties of life
Opinion of Justices				
Tennessee Small School Systems v. McWherter	TN	1993	A system of free public schools	A system of free public schools that provides at least the opportunity to acquire general knowledge, develop the powers of reasoning and judgment, and generally prepare students intellectually for a mature life
Committee for Educational Quality v. Missouri	MO	1993	Free public schools for the gratuitous instruction	Provide and fund a system of free public schools so that every child in Missouri will be afforded substantially equal educational opportunities without regard to place of residence, wealth or other economic circumstance
Abbott v. Burke	NJ	1994	Thorough and efficient system of free public schools	Equal educational opportunity for children enabling each student to become a citizen and a competitor in the labor market

Table 2-5--continued

Citation	State	Year	Constitution Language	Interpretation
Rose v. Council for Better Education	KY	1989	An efficient system of common schools	Must be substantially uniform throughout the state providing every child with an equal opportunity to have an adequate education
Edgewood School Dist. v. Kirby	TX	1989	Efficient system of public free schools	Substantially equal access to similar revenues per pupil at similar levels of tax effort so that students are afforded a substantially equal opportunity to have access to educational funds
Carrollton-Farmers v. Edgewood Ind. School District	TX	1992		
Helena Elementary School Dist. No. 1	MT	1989	Basic system of free quality public elementary and secondary schools	Equality of educational opportunity
Pauley v. Kelley	WV	1979	Thorough and efficient system of free schools	System which develops, as best the state of education expertise allows, the minds, bodies, and social morality of its charges to prepare them for useful and happy occupations, recreation and citizenship
Seattle School Dist.	WASH	1979	A general and uniform system of public schools	Duty to make ample provision for the basic education of our resident children through a general and uniform system

Table 2-6. Interpretation of State Education Clauses: Finding Finance Systems Constitutional

Citation	State	Year	Constitution Language	Interpretation
Bismarck Public School No. 1 v. State	ND	1994	A uniform system of free public schools	System not unconstitutional although it may reach an unconstitutional result
Skeen v. State	MINN	1993	General and uniform system of education	Adequate level of education which meets state standards for all students
Kukor v. Grover	WIS	1989	District schools, which shall be as nearly uniform as practicable	Guarantees a system of education at least at the level of state standards
Richland County v. Campbell	SC	1988	A system of free public schools	Guarantees equal standards and equal opportunity
Fair School Finance Council v. State	OK	1987	A system of free public schools	Guarantees a basic, adequate education according to state standards
Britt v. North Carolina State Bd. of Educ.	NC	1987	A general and uniform system of free public schools	Equal access to adequate schools
East Jackson Public Schools v. State	MICH	1984	A system of free public elementary and secondary schools	Adequate education
Hornbeck v. Somerset County Bd. of Educ.	MD	1983	A thorough and efficient system of free public schools	Basic public school education
Lujan v. Colo. State Bd. of Educ.	CO	1982	Thorough and uniform system of free public schools	Equal educational opportunities but not necessitating equal educational expenditures per pupil

Table 2-6--continued.

Citation	State	Year	Constitution Language	Interpretation
Levittown Union Free School Dist. v. Nyquist	NY	1982	A system of free common schools	Minimally acceptable facilities and services
Reform Educ. Financing Ineq. v. Cuomo		1993		
McDaniel v. Thomas	GA	1981	Adequate public education	Adequate education, not equal educational opportunities
Danson v. Casey	PN	1979	A thorough and efficient system of public education	Adequate, basic, or minimum education
Cincinnati School Dist. v. Walter	OH	1979	A thorough and efficient system of common schools	Students may not be deprived of educational opportunities
Olsen v. Johnson	OR	2e+07	A uniform and general system of common schools	Minimal level of educational opportunities
Coalition for Equal School Funding v. State				
Thompson v. Engelking	ID	1975	A general, uniform and thorough system of public, free common schools	Interpreting uniformity-uniformity in terms of curriculum, not uniformity in funding
Gould v. Orr	NEB	1993	Free instruction in the common school	State constitution guaranteed free instruction, not equal instruction.

Table 2-7. Equity Cases Cited in Chronological Order

	Case	State	Year	Court
1.	Brown v. Board of Education of Topeka	Kansas	1954	Federal
2.	McInnis v. Shapiro	Illinois	1968	Federal
3.	Burrus v. Wilkerson	Virginia	1969	Federal
4.	San Antonio v. Rodriguez--Rodriguez v. San Antonio	Texas	1971-73	Federal
5.	Serrano v. Priest/Serrano II	California	1971/1976	State
6.	Van Dusartz v. Hatfield	Minnesota	1971	State
7.	Robinson v. Cahill	New Jersey	1972-73	State
8.	Milliken v. Green	Michigan	1973	State
9.	Thompson v. Enkeling	Idaho	1975	State
10.	Olsen v. State of Oregon	Oregon	1976	State
11.	Horton v. Meskill (Horton II)	Conn.	1974/1977	State
12.	Pauley v. Kelley	WV	1979	State
13.	Board of Education of City School District, etc. v. Walter	Ohio	1979	State
14.	McDaniel v. Thomas	Georgia	1981	State
15.	Board of Education, etc. Levittown v. Nyquist	New York	1982	State
16.	Plyler v. Doe	Texas	1982	Federal
17.	Hornbeck v. Somerset County Board of Education	Maryland	1983	State
18.	Dupree v. Alma School District No. 30 of Crawford Co.	Arkansas	1983	State
19.	Fair School Finance Council of Oklahoma v. State	Oklahoma	1987	State
20.	Richland v. Campbell	So. Carolina	1988	State
21.	Helena Elementary School District v.State	Minnesota	1989	State
22.	Edgewood Independent School District v. Kirby	Texas	1989	State
23.	Kukor v. Grover	Wisconsin	1989	State

Table 2-7--continued.

Case	State	Year	Court
24. Rose v. Council for Better Education	Kentucky	1989	State
25. Abbott v. Burke /Abbott II /Abbott III / Abbott IV /AbbottIV	New Jersey	1985/90/94 /97	State
26. Coalition for Equal School Funding v. State	Oregon	1991	State
27. Gould v. Orr	Nebraska	1993	State
28. <i>Tennessee v. Small School Systems et al V. McWherter</i>	Tennessee	1993	State
29. Alabama Coalition for Equity v. Hunt	Alabama	1993	State Cir.
30. McDuffy v. Sec'y of the Executive Office of Ed.	Alabama	1993	State
31. Pawtucket v. Sundlum	Rhode Island	1994	State
33. Campbell County School Dist, State of Wyoming, et.al. v. State of Washington	Washington	1995	State
34. St. Johns County, FL v. Northeast Florida Builders Assoc.	Florida	1991	State
35. Florida Dept. Of Education v. Glasser	Florida	1993	State
36. Coalition for Adequacy & Fairness in School Funding, Inc.	Florida	1994	State Cir.

Federal and State Court Cases on Finance Equity

Brown v. Board of Education of Topeka¹⁷¹ was the first case to have a major impact on court equity decisions. In this case, the Supreme Court stated that education was one of the most important state functions and vital to developing an informed citizenry.

Education is perhaps the most important function of state and local governments . . . it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of education. Such an opportunity, where the state has undertaken to prove it, is a right which must be made available to all on equal term.¹⁷²

The Brown case challenged the “separate but equal” doctrine adopted in Plessy v. Ferguson¹⁷³ that served as the basis for the practice of segregating white and black children in public schools. In overturning Plessy, the court stimulated equity concerns by prohibiting the states from denying any person the equal protection of the law. The U.S. Supreme Court found that

where a state has undertaken to provide an opportunity for an education in its public schools, such an opportunity is a right which must be made available to all on equal terms.¹⁷⁴

This finding was based on the court’s interpretation of the equal protection clause of the Fourteenth Amendment and served as a cornerstone for legal challenges for state school finance systems.

McInnis v. Shapiro¹⁷⁵ was the first major case to challenge a public school finance system. In 1968, Illinois public school finance statutes were challenged based on the wide variations in per-pupil expenditures throughout the state. The plaintiff’s claim that Fourteenth Amendment rights to equal protection were being violated was not supported by the federal district court. In dismissing the suit, the court also held that the public school finance system was not discriminatory.¹⁷⁶ Because the state’s foundation program guaranteed a minimum expenditure per student, the court ruled that the decisions of the Illinois legislature to permit local choice and experimentation in school expenditures were reasonable. Although the court was sympathetic to the plaintiff’s case by agreeing that poorer school districts should have more funds with which to improve their schools, it stated that the inequality was an “inevitable consequence of decentralization.”¹⁷⁷

In 1969, the plaintiff in the Burrus v. Wilkerson¹⁷⁸ case argued that the equal protection clause of the Fourteenth Amendment was violated by the substantial disparities in educational opportunities in different districts throughout the state of

Virginia. The case was dismissed in federal court. The court stated that they “have neither the knowledge, nor the means, nor the power to tailor the public monies to fit the varying needs of these students throughout the state.”¹⁷⁹ In this case, the court found the Fourteenth Amendment afforded no protection from the disparities in educational opportunities in the Virginia’s public school finance program. The courts continued to be confronted with a judicially unmanageable standard because of the absence of an acceptable measure of educational need.

San Antonio v. Rodriguez¹⁸⁰ was the landmark federal school finance equity case. In 1973, the U. S. Supreme Court reversed a lower court ruling that the Texas school finance system was discriminatory and upheld the Texas school finance system against an equal protection challenge. The plaintiffs alleged the funding disparity between more and less affluent school districts in the state was a violation of the federal equal protection clause of the Fourteenth Amendment.¹⁸¹ Plaintiffs from poor property districts contended they were a “suspect” class because of these disparities and that such a classification was discriminatory. A second claim was that education was a “fundamental” right.¹⁸² The Supreme Court held that there was no violation of the Fourteenth Amendment equal protection clause because Texas provided a basic education, promoted local control, and did not disadvantage a suspect class.¹⁸³ Education as a right was not protected by the constitution, therefore education was not a fundamental right.¹⁸⁴ There was no violation of the Fourteenth Amendment equal protection clause, and the Texas foundation system withstood the rational relationship test.¹⁸⁵

The court concluded that the state school finance system did not violate the equal protection clause of the Fourteenth Amendment, despite the revenue disparities based on

the fiscal ability of the school districts.¹⁸⁶ The court's ruling in the Rodriguez case limited the federal judicial role in public school financial reform. The state court systems became the principal means of challenging the equity of state finance systems because of the precedent established in the Rodriguez case.¹⁸⁷

The seminal case for challenges to public school finance systems was the 1971 case, Serrano v. Priest.¹⁸⁸ The contention was that the equal protection clause of the California Constitution and the Fourteenth Amendment to the U. S. Constitution were violated due to disparities among districts in the amount of per-pupil funding caused by variations in local property wealth.¹⁸⁹

The California Supreme Court ruled that the public state finance system failed the strict scrutiny test and violated both constitutions. The court ruled the right to an education in public schools was a fundamental right that could not be conditioned on wealth.¹⁹⁰ Federal and state equal protection guarantees were violated because of gross disparities in district revenue. The finance system failed the strict scrutiny standard because the financial system was not considered necessary to further local administrative control. The doctrine of fiscal neutrality, the concept that local property wealth and educational revenues cannot be correlated, was applied for the first time in Serrano.¹⁹¹

Wealth neutrality was upheld when the court reviewed Serrano II.¹⁹² In 1976, the California Court revised the issue as well as allegations that the state legislature had failed to adequately address the school finance issue. The decision in Serrano II was based on wealth neutrality using the cost quality concept, which created the standard for assessing the equity of the state finance programs as student equity. Serrano established a manageable standard for measuring educational opportunity. The foundation for challenges based on equal protection by devising the wealth neutrality concept and

challenging the equal protection clause in the state constitution were created as a result of the Serrano ruling.¹⁹³

In Van Dusartz v. Hatfield,¹⁹⁴ decided six weeks after Serrano, a United States District Court in Minnesota held that the state's system of public school finance violated the equal protection guarantee of the Fourteenth Amendment. The court found that public school students have a right to the level of spending for their education unaffected by variations in the taxable wealth of their school district.¹⁹⁵ The Van Dusartz court did not require absolute uniformity of school expenditures but instead looked to the state legislature to remedy the situation. The court encouraged the state "to adopt one of many optional financing schemes which do not violate the equal protection clause."¹⁹⁶

The year after the Serrano decision, the state Supreme Court of New Jersey ruled in Robinson v. Cahill¹⁹⁷ that the public school foundation system violated the equal protection clause of the state constitution and the U. S. Constitution. The decision was rendered following a protracted legal battle for which there were seven state supreme court rulings.¹⁹⁸ The court ruled that the "thorough and efficient" language of the state constitution was violated. In the court's opinion, the "thorough" required by the New Jersey constitution meant something beyond the minimum foundation. However, the court did not find that education was a fundamental right.¹⁹⁹

The court determined that a direct relationship existed between expenditures and educational quality and that per-pupil funding disparities showed the state failed to provide the equal opportunity for the children guaranteed by the New Jersey state constitution. Application of the strict scrutiny standard to the school finance system found no compelling state interest to justify the system. The New Jersey Supreme Court

ordered that the state legislature immediately devise a new financial scheme for public education in the state.²⁰⁰

The Robinson case gave the impetus for states to review their methods of school fund allocation by the scrutiny of education clauses that had language such as thorough and efficient, adequate, or ample. Whereas Serrano focused on equality, Robinson focused also on adequacy.²⁰¹

In Milliken v. Green,²⁰² the Michigan Supreme Court held that the state's system of school relied on the wealth of local school districts, resulting in substantial inequality of maintenance and support of the public schools. The plaintiffs argued that such inequality denied equal protection of the laws as guaranteed by the Michigan Constitution.²⁰³

The court found that the state met its constitutional obligation of providing a basic system of schools throughout the state and that the Michigan Constitution did not require equal expenditures for all students as an expression of equal educational opportunity. Because the court did not require absolute equality in the distribution of state educational resources to each child in the public schools, the Michigan foundation system was upheld as constitutionally valid.²⁰⁴

In 1975, the Supreme Court of Idaho upheld the constitutionality of the state's public educational finance program in Thompson v. Enkeling.²⁰⁵ At issue was the disparity in per-pupil funding among districts due to substantial reliance on local ad valorem taxes in support of education.²⁰⁶ The court found that although availability of funds was critical in determining educational adequacy, smaller per-pupil expenditures did not result in a denial of equal protection.²⁰⁷ Fostering local control of education was found by the court to be a rational basis for promulgating the state's foundation finance

system. The court majority issued strong language on this point stating that acceptance of equal protection arguments “would be an unwise and unwarranted entry into the controversial area of public school financing, whereby this court would convene as a super legislature, legislating in a turbulent field of social, economic, and political policy.”²⁰⁸ Since the court determined that education was not a fundamental right, the strict scrutiny test was not applied. Therefore, the Idaho foundation plan was upheld as constitutional.²⁰⁹

Again in 1976 the constitutionality of a state foundation system was upheld in Olsen v. State of Oregon.²¹⁰ The issue was the disparity in per-pupil spending due to heavy reliance on local wealth for funding schools, which challenged the educational opportunity of students residing in poorer districts. The court declared that the Oregon Constitution was required only to provide a basic level of education to all students and did not dictate uniform per-pupil funding throughout the state.²¹¹

Horton v. Meskill²¹² was a 1985 decision decided by the Supreme Court of Connecticut that declared the public school finance system violated the state constitution, but not the federal constitution. The court relied heavily upon Rodriguez and Robinson and held that the right to an education was so basic and fundamental that any infringement of that right must be “strictly scrutinized.” Furthermore, public school students were entitled equally to the right of public education and any educational finance system that depended “primarily on a local property tax base without regard to the disparity in the financial ability . . . to finance an educational program and with no significant equalizing state support, cannot pass ‘strict judicial scrutiny’.” The high court stated that the state legislature was the appropriate body to develop a constitutional system of educational finance.²¹³

In Pauley v. Kelly²¹⁴ the court relied on the state equal protection clause as well as the “thorough and efficient” language of the state constitution to render its decision. The West Virginia Supreme Court declared the finance system discriminatory and in violation of the state constitution because a thorough and efficient system of education was not provided.²¹⁵ The court was not willing to assess equity solely on fiscal neutrality and required the state to go beyond basic skills education to the development of minds, bodies, and social morality and to the preparation of students for useful and happy occupation, citizenship, and effective economic participation. The Pauley case was important because student success was defined not only by fiscal input, but by student output. The court declared that children should be educated not only to a standard of adequacy but also to their capacity.²¹⁶

In 1980, the Ohio finance distribution system was examined by the state supreme court in Board of Education of City School District v. Walter.²¹⁷ The court applied the rational relationship test to the system but declined to apply the strict scrutiny standard. The Ohio court declared that the state had a rational purpose promoting local control over education and that the constitutionality of legislative acts should be assumed unless a clear violation were evident. The state General Assembly had a record of attempting to amend funding disparities in per-pupil inequities. The court ruled that the distribution system of funding was not irrational, the system was not in violation of the state constitution, and that the Ohio General Assembly had not abused its discretion.²¹⁸

In McDaniel v. Thomas,²¹⁹ the Georgia Supreme Court ruled that although evidence existed of a positive relationship between the level of funding and educational opportunity, the school financing system met the state constitutional requirement of providing basic educational opportunities to all children.²²⁰ The court declared that

education was not a fundamental right guaranteed in the constitution and that the state did not violate the adequate education provision. According to the court, the state financing system had a rational relationship to the state purpose of providing a minimum level of funding to each student. Although the court recognized substantial per-pupil funding disparities in the system and urged the legislature to develop a more equitable system of funding schools, the funding system did not violate the Georgia Constitution. The court concluded that education was not a fundamental right in Georgia, and disparities in school funding did not violate either the state equal protection or education adequacy provision.²²¹

New York's foundation distribution system was upheld by the court of appeals in Levittown v. Nyquist²²² in 1982. At issue were per-pupil funding inequities among districts, especially in urban areas. The court found that the state constitution required only that a free public schooling system be provided, not equitable per-pupil funding. The school finance system did not violate the constitution because it complied with this requirement by establishing minimum standards for funding. The court cited Rodriguez in deciding the state had a rational purpose in allowing local control of education and that legislative actions did not result in funding disparities.²²³ And, although the court regarded education as important, it was not a fundamental right.²²⁴

The ruling in Plyler v. Doe²²⁵ suggested that federal involvement in educational equity problems remained a possibility. At issue in this case was the state's refusal to educate illegal aliens. The Supreme Court ruled that mid-level scrutiny was required, necessitating substantial relations to an important state interest. Although the case was concerned with total educational deprivation, the court did not rule on fundamentality.²²⁶

In Hornbeck v. Somerset,²²⁷ the state school funding formula was challenged in the Maryland Supreme Court. The court ruled that exact per-pupil funding levels were not required.²²⁸ The court also ruled that education should not be declared a fundamental right, citing Rodriguez. Because of this nonfundamentality and the absence of a suspect class based on wealth, the strict scrutiny test was not applied. When the rational basis test was applied, the court determined the state had a rational basis for using the formula to promote local control as denoted by the “thorough and efficient” requirement in the state constitution. The supreme court found that the funding formula did not violate either the state constitution or the Declaration of Rights.²²⁹

In Dupree v. Alma,²³⁰ the Arkansas Supreme Court declared that the state foundation plan violated the Arkansas Constitution. The court dismissed the claim that the goal of the foundation plan was to advance local control of education and stated that the provision of more equitable funding would not decrease local control. The court found the financing scheme failed to meet the state’s education obligation and could not find a rational relationship between the disparity of per-pupil funding among districts and the needs of individual districts. The issue of education as a fundamental right was not addressed since the court did not apply the strict scrutiny test.²³¹

The Oklahoma state school finance system withstood a challenge to its constitutionality in Fair School Finance Council of Oklahoma v State.²³² The plaintiffs argued that the state educational plan was inequitable and violated the equal protection clause.²³³ The court found that a suspect class did not exist and that no fundamental right had been violated. Furthermore, since the purpose of the plan was to allow local control of education and autonomy, a rational relationship existed between the finance plan and a legitimate state purpose. The plaintiff’s claims that the system violated several

provisions of the state constitution were not rejected by the court. Furthermore, the court held that a law would be found constitutional unless it could be clearly demonstrated that the legislature acted arbitrarily or capriciously. The Oklahoma public school finance system was upheld as constitutional because the court could find no such violation.²³⁴

The South Carolina State Supreme Court found the school finance system valid in Richland v. Campbell.²³⁵ The court found that the foundation system allocated more funds to poor districts and therefore had a rational means of equalizing educational opportunity. The South Carolina school finance system was declared constitutional.²³⁶

In 1989, the Montana Supreme Court declared that the state school funding system was unconstitutional in Helena Elementary School District v. State.²³⁷ The court interpreted equal educational opportunity as a constitutional guarantee and adjudged that the finance system failed to ensure equality of opportunity.²³⁸ Per-pupil funding differences among school districts were significant, despite the systems equalizing provisions.²³⁹ Therefore, the court ruled that the funding disparities violated student rights to equal educational opportunity under the state's education article. The state's arguments of fiscal difficulties, the need for local control, and that outputs should be used instead of inputs to measure equal opportunity were rejected. The court found that Montana's minimum foundation program did not provide funds for even a minimal quality level of education and that the system was in violation of the constitution.²⁴⁰

The Texas Supreme Court, in Edgewood v. Kirby,²⁴¹ ruled that the state's constitution was violated because the requirement for an efficient public school finance system was violated. The court found that the difference in the property wealth of school districts was substantial with taxable wealth in the richest district 700 times the poorest district. Despite the legislature's attempts to reduce the funding disparities through the

Foundation School Program by awarding more state aid to property poor districts, the funding was not sufficient to cover minimum requirements mandated by the state.²⁴²

The concept of efficiency was a focus of the court's discussion. Although the constitution did not specifically define "efficient," the state argued that efficient meant simple and inexpensive. However, the court ruled that providing all students with equal educational opportunity and districts being allocated similar revenue were mandates for an "efficient system" of public school finance. The court required a strong relationship between tax effort and available resources and equal access to similar revenues per-pupil for similar tax effort. The court also found that the state legislature had the responsibility to maintain an efficient system if a state were to make education a fundamental right, including funding adequacy, and uniformity of educational opportunities. The court concluded that a state financing system that caused wide disparities in revenue among school districts violated the "efficient" provision of the education clause of the Texas Constitution.²⁴³

In Kukor v. Grover,²⁴⁴ the Wisconsin Supreme Court upheld the state's school finance plan against charges that it violated the constitution's uniformity requirement and equal protection provision. The court applied a rational basis standard in response to claims of a violation of equal protection. The case dealt with both spending disparities and denial of educational opportunity. Funds for specific programs to meet the needs of disadvantaged students were not covered by considerations of uniformity.²⁴⁵

The Kentucky Supreme Court ruled in 1989 in Rose v. Council for Better Education²⁴⁶ that the finance program as well as the entire state public school system violated the state constitution's requirement for efficiency.²⁴⁷ The court determined that the state school system was underfunded and inadequate, fraught with inequities, ranked

in the lower 20% to 25% of categories used to evaluate educational performance, and lacked uniformity among districts in educational opportunities.²⁴⁸ The court agreed that efficiency referred to substantial uniformity of resources being applied throughout the system to ensure equal opportunity for a good education.

Furthermore the court found that a positive correlation existed between the level of expenditures and the quality of education. Because of substantially different levels of school funding among districts, the court held that an efficient system of common schools had not been provided. These disparities were the result of a lack of uniformity and lack of adequacy of the local and state funding system for education.²⁴⁹

In Abbott v. Burke,²⁵⁰ the New Jersey Supreme Court found the public school finance system unconstitutional as it had earlier in the Robinson decision. At issue in the Abbott case was the level of education received by students in poor urban districts. The state's public school funding system was declared unconstitutional for these districts because students did not receive the "thorough and efficient" education mandated by the state constitution.²⁵¹ The constitutional failure was characterized by the judiciary as "clear, severe, extensive, and of long duration."²⁵² Funding levels were required to be "certain" and "adequate" each year in poor urban districts to meet the educational needs of these disadvantaged districts.²⁵³ According to the court, the state had an obligation to provide a minimum level of educational opportunity.²⁵⁴

The court referenced its decision in Robinson.

If the lowest level of expenditures per-pupil constituted a thorough and efficient education, then the constitutional implication that no matter how many districts were spending well beyond the level, the system would be constitutional.²⁵⁵

In 1990, the court ordered the legislature to raise spending in the state's poorest urban school systems "to assure that poorer urban districts' educational funding was substantially equal to that of property-rich districts."²⁵⁶ The court's order to amend the finance formula was directed specifically to urban districts with little wealth and did not address other educational disparities in the state. The amended plan could not depend on the taxing ability of local districts.²⁵⁷

The Abbot II,²⁵⁸ decision in 1990 was historic because the court required more than equity between rich and poor districts. The court also held that adequate opportunities required equitable funding, with imbalances favoring the needy.²⁵⁹ According to the court,

the level of education offered to students in some of the poorer urban "basic skills" districts is tragically inadequate. In fact, if absolute equality were the constitutional mandate, and "basic skills" sufficient to achieve that mandate, there would be little short of a revolution in the suburban districts when parents learned that basic skills is what their children were entitled to, limited to, and no more.²⁶⁰

In the Oregon case of Coalition for Equitable Funding v. State,²⁶¹ the plaintiffs alleged that the state failed to ensure that the local districts had funds necessary to meet state established standards by pointing out that the state constitution included a provision for schools of uniform quality "and that a claim might be considered if proven that the funding system lacked uniformity." The Oregon state court upheld the educational finance system; however, the court left the door open for future challenges. In this case, the court indicated that the safety net amendment to the constitution voted by the electorate in 1987 provided a remedy for funding disparities by giving local districts the right to levy local taxes without voter approval if the money was not available from state sources. The court ruled there was no violation of the equal protection clause because the

amendment anticipated potential disparities and provided a mechanism for addressing the disparities.²⁶²

The Nebraska Supreme Court addressed the issue of equality of education across districts in Gould v. Orr²⁶³ in 1993. The plaintiffs claimed that children from poor districts did not have equal access to resources and courses necessary for them to compete with their counterparts in wealthy districts due to funding disparities among districts. The court rejected the claim saying the state constitution guaranteed free instruction, not equal instruction, and that the plaintiffs failed to establish that spending differences affected educational quality.²⁶⁴

In Tennessee v. Small School Systems et. al. V. Mc Wherter,²⁶⁵ the court determined that the state educational system was unconstitutional and directed the legislature to develop an appropriate funding system. The court declared that education was a fundamental right, applied the strict scrutiny test, and found that the state system failed the strict scrutiny and the rational relationship standards of review applied. The court also determined that local control was not a compelling basis for a school finance system when the consequent effect was inequity in educational opportunities.²⁶⁶

Subsequent rulings by high courts in Massachusetts, Arizona, Wyoming, Ohio, and Vermont found the state finance systems unconstitutional. Lower court decisions in Missouri and Alabama struck down the public school finance systems. The issues of adequacy and equity were conjoined in these decisions. However, plaintiffs have not prevailed in all cases. State supreme court cases in Wisconsin, Minnesota, North Dakota, Virginia, Maine, Rhode Island, Illinois, and Alaska were not successful in challenging the state finance system. The courts generally have found, in these cases, the constitution was not abridged because some basic level of education was available to all students. In

states where public education finance systems have been invalidated, the construct of equity could not be separated from the construct of adequacy. The court's call was for quality education for all students.²⁶⁷

In the past, the courts' findings relative to adequacy have been less than definitive. In Rodriguez, an adequate education was defined by the court as one that "provided each child with an opportunity to acquire the basic minimal skills necessary for the enjoyment of the rights of speech and full participation in the political process."²⁶⁸ The definition of adequacy by the court in terms of minimal skills set the standard for subsequent cases.

According to theories emerging from the courts invalidating finance plans, Verstegen developed the following definition of adequacy.

An adequate education system ensures that a child is equipped to participate in political affairs and compete with his or her peers in the labor market regardless of circumstances of birth or where that child is educated.²⁶⁹

In the 1979 Pauley ruling, adequacy was implicit in the court mandate that the educational system be in alignment with the state constitution for a thorough and efficient system. The court sought details for a quality system including curriculum, facilities, materials and equipment, and personnel.²⁷⁰

In 1982, the court applied the minimal skills necessary standard in the Nyquist case and upheld the state educational funding system as constitutional. The court found that the plaintiff had not demonstrated that the educational facilities or services provided fell below the statewide minimum standard of educational quality and quantity. The court relied on the minimum standard, as in Rodriguez, as the floor for adequate education and commented that "the Federal Court may be said to fix a floor for the rights of our people, the ceiling may be set by each states own constitutional charter."²⁷¹

In the Rose case, the Kentucky Supreme Court, citing Pauley, judged the school system to be “constitutionally deficient” and mandated the state design a system to guarantee all children an opportunity for an adequate education. The court made clear with its mandate that the seven identified elements of an adequate educational system were established as minimum standards.²⁷²

In 1990, the New Jersey Supreme Court required in Abbott II that the legislature provide funding that would be adequate to meet the special educational needs of less affluent urban districts. The court noted the importance of providing a minimum level of educational opportunity for the students and understood that this minimum level for an adequate education would vary for all students, meaning something individual, and perhaps unequal, for each student.²⁷³

Adequacy was at issue in the case Alabama Coalition for Equity and Adequacy v. Hunt.²⁷⁴ The court found the Alabama schools inadequate and established specific criteria for adequacy using the state’s guidelines and policies for guidance. Using these guidelines to evaluate Alabama schools, the court found that “if inadequate educational opportunities exist in some systems, then the system as a whole must be deemed inadequate.”²⁷⁵ The court defined that the essential principle of the system of public schools required by the Alabama Constitution was to provide an adequate education for students.²⁷⁶

Recent cases in Alabama, Massachusetts, and Rhode Island, in which the courts found the finance systems to be unconstitutional, the courts definition of adequate was pivotal. In Hunt, McDuffy v. Sec’y of the Executive Office of Education,²⁷⁷ and Pawtucket v. Sundlum²⁷⁸ the courts’ findings relative to adequacy became more definitive.

Florida Court Cases on Finance Equity

Florida's constitution mandated that "adequate provision shall be made by law for a uniform system of free public schools."²⁷⁹ The interpretation of adequacy by the court was critical to states, like Florida, whose constitution explicitly mandated an adequate provision in the state education clause.

The education finance system in Florida has withstood several recent challenges. Legal challenges to Florida's funding system have focused on whether the funding system violated the state equal protection clause or the uniformity requirement. Specifically, litigation concerning the funding system challenged the optional local millage. To date, the court has upheld the discretionary local effort and found that

The Florida education funding formula, in allowing leeway millage, does not violate the equal protection clause, and substantial equality of education is not prevented by the use of leeway millage.²⁸⁰

In 1991, the court upheld the state constitutional requirement of a uniform system in St. Johns County, Florida v. Northeast Florida Builders Association.²⁸¹ The court determined that

the state constitutional requirement of "uniform system" of public schools only requires that system be provided that gives every student equal chance to achieve basic educational goals prescribed by legislature, not that every school district in the state receive equal funding or that each educational program be equivalent.²⁸²

However, the legislature was encouraged by the court to evaluate the fiscal restraints as to impediments to educational enhancements.²⁸³

The Florida Supreme Court upheld the legislature's authority to establish a cap on discretionary millage in Florida Department of Education v. Glasser²⁸⁴ in 1993 and ruled against the Sarasota school district in this case. This ruling in effect limited the discretion of Florida school districts to continue programs at risk due to decreased

educational funding by levying additional taxes above cap set by the legislature.

Although the court did not define adequate state funding, it implied that the situation was other than adequate. The opinions of the justices highlighted the adequacy issue and kept the door open for future litigation. Justice Barkett encouraged school districts to direct their efforts toward “assuring adequate state funding for all the educational needs of all our children.” Justice Kogan opined that the time may come “when competing legal restraints of the constitutional requirement for education uniformity v. the constitutional restrictions on the tax base cannot be reconciled in at least some counties without substantially altering the present taxing system.”²⁸⁵

The educational finance plan in Florida was challenged again in 1994. The Coalition for Adequacy and Fairness in School Funding Incorporated, as well as 45 districts and other individuals, filed suit in Leon County circuit court claiming the State of Florida failed to provide adequate educational opportunity in the public schools in violation of the state constitution. Specifically, the plaintiffs alleged that the students in the public schools were deprived of the opportunity to obtain an adequate education, the parents of many students were deprived of an opportunity to provide an adequate education for their children, and school districts and professionals were deprived of the ability to carry out their constitutional and statutory responsibility.²⁸⁶ The complaint was ultimately dismissed.

Legal Summary

Fiscal equity has been the goal of school finance litigation for the past 50 years. Central to fiscal equity was the belief that the education a child receives should not be dependent on the wealth of the district in which the child resided. Traditionally, the main

criterion used to evaluate fiscal equity has been the per-pupil expenditures for each district.²⁸⁷

Recently, the concept of fiscal equity has been broadened to require that every child, regardless of circumstances, receive adequate educational opportunities. Education costs vary. Some students may require more money to purchase their basic educational needs than others. Consequently, the criteria for determining equity has increasingly become more outcome, rather than input related.²⁸⁸

Both equity and adequacy were issues in school educational funding challenges. State school funding systems can be challenged based on the equal protection clause of the state's constitution or on the interpretation of the wording of the state's education clause. Recent decisions by state courts on the constitutionality of finance systems have turned on whether the system provided sufficient revenue for all students to acquire the constitutionally required level or standard of education. In states where the finance system has been invalidated, the high court has defined this standard by applying the language in the state education article and interpreting it according to the current time.²⁸⁹

These courts found a minimum or basic education to be inadequate and therefore unconstitutional. The constructs of equity and adequacy were joined because what the court determined as adequate was largely determined by the educational resources and learner outcomes evident in the highest spending districts. Conversely, in states where the finance system has been upheld, the minimalist standard set in Rodriguez was applied by the courts; i.e., because all students had access to a minimum, basic education, the system was not unconstitutional despite disparities in educational quality and equality.²⁹⁰

Recent litigation has focused on adequacy issues while emphasizing equity. Plaintiffs suits have gone beyond per-pupil expenditures and have called into question

whether the amount being spent equated to an adequate or fair level of resources to meet constitutional provisions. Courts in Alabama, Kentucky, Massachusetts, Vermont and Wyoming have ruled in favor of the plaintiffs finding that funds determined by foundation formulas that set a minimal guarantee of funding were insufficient. The Wyoming high court ordered the legislature to define, design, and provide funds for educational goods and services guaranteeing each student “a complete, proper, and quality education.”²⁹¹ This decision had national implications because it asked lawmakers to specifically define and assess the costs, district by district, of what constituted a fair, equitable, adequate, and quality education. Minimal foundation programs, implemented currently in 40 states, may no longer meet the condition of minimal adequacy since adequacy and equity were associated.²⁹²

The implication is that finance systems must close the gap between the best and worst financed school system in the state and provide equal opportunities for excellence in education. Finance systems of the future would be grounded on the belief of a high-quality education for all children, not a basic or minimum education. The goal would be equity and excellence for all children.²⁹³

This section reviewed legal principles and cases relative to finance equity. Chapter 2 concludes with a discussion of current issues in educational finance.

Current Education Finance Issues

In this concluding section to Chapter 2, current issues related to educational finance that affect equity were discussed. These issues included state/federal funding, per-pupil expenditures, allocation of resources, standards-based education, performance-

based funding, school based-budgeting, facilities, local property taxes, and finally the shift from equity to adequacy.

Equity has continued to be a critical issue in educational finance. Concerns surrounding taxation are becoming increasingly complicated as the courts become more aggressive with demands for equity and quality in education. The entire school finance issue is complex. This complexity is intensified by public concerns that schools may be funded at different levels. The concept of treating people unequally via of recapturing dollars from rich districts has typically been more difficult for the public to accept than the idea of providing equal dollars for everyone. The use of simple market forces such as charter schools, parental choice, or vouchers may have greater public acceptance than complex finance reform. As dollars spent for education have increased, the public has required greater fiscal accountability.²⁹⁴

In addition to this skepticism, public schools are confronted with a demand for resources unprecedented in recent history. Rising enrollments have created the need for more space and teachers. Schools have also been searching for additional resources to implement new reforms. The majority of educational reform bills enacted in recent years involving standards-based education, performance funding, and site-based management as well as continuing issues such as per-pupil expenditures, allocation of resources, facilities, local property taxes, and the increasing emphasis on adequacy have put a growing burden on state funding formulas.²⁹⁵

Although states are individually responsible for school funding, they have traditionally turned control of school finances over to school districts. This has created a system of de facto economic determinism. Wealthy districts with high property values fund their schools at high levels with monies generated from what are often very low

property taxes. Districts with low or declining property values must subsist with low levels of revenue generated from extremely high property taxes. To counter this built-in inequity, the legislatures in most states have devised funding plans that guarantee all schools minimum funding on a per-pupil basis. This provides each school with revenue for a basic level of education for all students. However, these “foundation” plans may not have eliminated the gross disparities in funding among schools since districts may add property-tax-generated revenues to the foundation amounts. Ideally, restructured financing plans will tend to “level up” the poorer districts to funding levels that approximate those in wealthier districts. Most school funding litigation during the last two decades has focused on the area of financial inequity and the attendant lack of equal educational opportunity engendered by these plans.²⁹⁶

Federal and State Funding

The level of federal and state funding local districts received has begun to shrink in recent years. Table 2-8 shows that local spending as a percentage of total spending declined from 53% in 1972 to a low of 44% in 1987. State spending grew quickly over this same period of time, from 38% in 1972 to 53% in 1987. However, by 1992, the trend had reversed, with local spending rising again to 47% of all spending and state spending declining to 46% of spending. Federal assistance has been minimal and aberrant during this period, declining from 9% of all spending in 1967 to 7% in 1992.²⁹⁷

Per-Pupil Expenditures

The United States annually spends over \$300 billion each year on public elementary and secondary education. Public education is generally the largest cost item in state budgets.²⁹⁸ Real expenditures for K-12 education in the United States, adjusted

for inflation, increased from \$2 billion in 1980 to almost \$190 billion in 1990. This growth in expenditures for education was three times the Gross National Product (GNP). Public education for K-12 represented 3.6% of the GNP in 1990 compared to 4.0% in 1970, 2.8% in 1960, and 1% a century before.²⁹⁹

Table 2-8. Funding Sources for Public Elementary and Secondary Education

Funding Sources	1967	1972	1977	1982	1987	1992
Local	53%	53%	48%	45%	44%	47%
State	38%	38%	43%	48%	50%	46%
Federal	9%	9%	9%	7%	6%	7%
Total	100%	100%	100%	100%	100%	100%

Source: NCES Digest of Education Statistics, 1994, Table 157

Since the 1920s, per-pupil expenditures for education have grown an average of 50% each decade. Nationwide, expenditures per-pupil have increased by one third each decade for the last five.³⁰⁰ Figure 2-1 shows that the rate of growth actually declined in the 1970s and 1980s.

Table 2-9. K-12 Per-Pupil Expenditures/1920-1990

Year	Percent Change
1920-30	100%
1930-40	30%
1940-50	44%
1950-60	51%
1960-70	67%
1970-80	36%
1980-90	35%

Source: NCES, 1993 Digest of Educational Statistics, Table 162, p.160

The index used for the cost of living adjustments made a difference in the real growth rate calculated. In 1967, public K-12 schools spent \$499 per-pupil. By 1991, spending increased to \$4,902 per-pupil. This showed an increase of 880% before cost of living adjustments, but did not indicate accurately the investment in resources. A cost of living adjustment was necessary to understand how much educational spending has grown relative to other goods and services. Most analyses of educational spending over time, including the National Center for Education Statistics, currently use the Consumer Price Index (CPI) or the Gross Domestic Product (GDP).³⁰¹ According to the CPI, expenditures per student have more than doubled, increasing by 115% in real terms since 1966-67 from \$2,782 per enrolled pupil to \$5,990. This represents an average growth rate of over 3% per year over inflation, as measured by the CPI.³⁰²

These indices adjusted spending in education by the amount that either prices for consumers (CPI) or the entire economy (GDP) grew. Some argue that schools do not purchase a market basket of goods that is indicative of a typical consumer's purchases or the total production of the nation. The argument has been that because schools rely heavily on people, they should be compared only to service industries which are also labor intensive. The Economic Policy Institute claimed the National Service Index (NSI), a relatively new adjustment for inflation, more fairly compared the industry of education to other sectors. This NSI index showed a slower growth rate in spending than the CPI or GDP.³⁰³ However, Odden believed this institute's argument for a more generic educational inflation adjustment should be challenged. According to Odden, the CPI should be the relevant inflation factor because the CPI was the factor used in almost all other parts of the economy to adjust for inflation and because tax dollars come from households where the CPI was used.³⁰⁴

Every state in the union experienced significant growth in per-pupil expenditures ranging from a less than doubling of expenditures per-pupil in Utah, to an increase of nearly five times in New Jersey and in Washington, D.C. By 1992, New Jersey spent three times more than Utah spent per-pupil.³⁰⁵

Spending on K-12 education across the United States and across local school districts has long been characterized by disparities that reflect differences in property wealth and tax rates.³⁰⁶ A study by the U.S. Government Accounting Office (GAO) published in 1998 found that high-income districts out spent low-income districts by an average of 24% more per student in the 1991-92 school year, the most recent year for which comparable data were available across states. The study suggested that a state's share of school spending may have a bigger impact on equity than targeting state aid to low-income districts. For example, Washington state did little targeting but contributed 75% of all school funds in 1991-92. The result was that the poorest districts had only \$225 less per-pupil than wealthy ones. And although state aid moved districts closer to parity, it did not close the equity gap. Connecticut provided three times more state aid to poor districts than wealthy districts in 1991-92. However, rich districts raised three times more revenue than poor ones and spent 34% more on poor students. The study also found that 29 states would have to shift their funding away from wealthy districts to poor or middle income districts or both to enable all districts to spend the state average per-pupil while also changing the average tax rate.³⁰⁷

This GAO report also found that state and federal money narrowed the gaps between high-and low-poverty school districts but failed to equalize spending in states with most of the nation's poor children. The GAO study discovered that federal grant

money eliminated funding gaps in 16 of 37 states but fell short of helping two thirds of poor children who live in the 21 states with inequitable funding.³⁰⁸

The report claimed that the size of the grants from federal and state programs was more important in eliminating spending gaps than special formulas targeted to helping impoverished areas. The GAO study concluded that the heavy reliance by schools on property tax revenues was unfair to poor areas. The report found, "Despite state and federal efforts to close the funding gap, the most important factor determining the size of the gap was the tax effort of the high-poverty districts compared with low-poverty districts."³⁰⁹ These results supported plaintiff's court arguments in school finance lawsuits that funding mechanisms that relied on property taxes were unfair to low-income areas because high-wealth districts were able to raise more money.

Some states closed their spending gaps by raising their share of total school spending and by targeting aid to poor districts. The GAO report concluded, "In general, the larger the equalization effort in these states in the school year 1991-92, the smaller the funding gaps between poor and wealthy districts . . . to more successfully address funding gaps, most states would have to increase state equalization efforts and impose some restraints on local tax efforts."³¹⁰

The effect of inequitable finance systems was reported to Congress in 1991. Inequitable systems of school finance inflict disproportionate harm on minority and economically disadvantaged students. On an inter-state basis, such students are concentrated in states, primarily in the South, that have the lowest capacities to finance public education. On an intra-state basis, many of the states with the widest disparities in educational expenditures are large industrial states. In these states, many minorities and economically disadvantaged students are located in property-poor urban districts which fare the worst in educational expenditures (or) in rural districts which suffer from fiscal inequity.³¹¹

Darling-Hammond claimed the U.S. educational system was one of the most unequal in the industrialized world by stating, "In contrast to European and Asian

nations that fund schools centrally and equally, the wealthiest 10% of U.S. school districts spend nearly 10 times more than the poorest 10% and spending ratios of 3 to 1 are common within states."³¹² Darling-Hammond concluded that educational outcomes for minority children were much more a function of their unequal access to key educational resources than they were a function of race.

Verstegen found a significant relationship between federal, state, and local educational revenue and student achievement. However, no relationship was found between basic test scores and educational spending. Verstegen also researched the issue of revenue distribution which resulted in four key findings. First, revenue increases in state and districts were not equal. Second, wealthy states with relatively more affluent children received an increase in funds while less affluent states with large numbers of poor children received decreasing funds. Third, all new revenue received by the states was a result of educational reform initiatives. Fourth, the gaps in equity and quality among school districts and states were increasing.³¹³

Kozol summarized some startling facts about inequities in school spending and school facilities in the United States in Savage Inequalities.³¹⁴ He found that the amount spent per-pupil ranged from \$1500 to \$15,000, depending on where a child lived. Kozol described the striking differences between public schools serving students of color in urban settings and their suburban counterparts, which typically spent twice as much per student for populations with many fewer special needs.³¹⁵

Allocation of Resources

Across the United States, schools spent approximately 60% of their resources on direct student instruction. This percentage has remained constant regardless of the

amount spent per-pupil and was consistent across grade levels. This consistency in the pattern with which schools spent educational funds suggested that the effectiveness of new money on student performance may be limited. Unless these resources were used in new ways, the potential effectiveness of those new dollars was restricted.³¹⁶

A report from the Consortium for Policy Research in Education (CPRE) found that spending patterns between high- and low-expenditure districts were remarkably similar and that high spending districts offered more of the common basket of educational goods than did low spenders. Student performance increases were unlikely to occur when additional revenues were spent in the same way as current educational revenues. The persistent public perception that schools do not use existing dollars effectively heightened the problem. This negative perception inhibited public support for the investment of dollars and effort required to help all students meet higher standards.³¹⁷

Studies by Hanushek have confirmed that the resources devoted to education have increased dramatically in recent years. Expenditures per-pupil in U.S. schools has more than doubled in real terms over the past 25 years. A decomposition of the spending growth shows that this increase was propelled by a combination of falling per-pupil ratios, increasing real wages to teachers, and rising expenditures outside the classroom. While the expansion of education for the handicapped has had a disproportionate effect on spending, most of the growth in expenditures during the 1980s came from other sources.³¹⁸

Although spending per-pupil has increased dramatically in the last three decades, the way schools looked and operated has not changed much for a majority of the students. Results from the report of the Economic Policy Institute have shown that from 1967 to 1991, schools spent more "at the edges" than for basic classroom instruction.³¹⁹

A large portion of new dollars outside instruction can be attributed to new services and expectations. Though an average of 56% of new dollars added since 1967 went to instruction, very few of them reached into the regular classroom. . . . On an average, districts spent 3% to reduce class size. Districts averaged 20% of their new dollars to raise average teacher compensation. But this spending did not raise the attractiveness of teacher salaries attracting a higher quality of teacher into the classroom. Instead, the new dollars on compensation went to keep up with the spiraling cost of benefits to retain an aging teaching force. Around one tenth of the new dollars went to add support to teachers in the form of instructional aides, more planning time for teachers and resource specialists. The remaining 25% went to general administration and operations.³²⁰

Teacher salaries accounted for 53% of all current spending by school districts. Furthermore, as districts received additional funds, 40% was spent on class size reduction and 10% was spent on salaries.³²¹ Nationally, the pupil/teacher ratio in public K-12 schools has declined from 26.9 in 1955 to 17.6 in 1994. Moreover, the pupil/teacher ratio declined every year but one between 1955 and 1990. Since 1990, the data have indicated the pupil/teacher ration has fluctuated between 17.2 and 17.6.³²²

The Economic Policy Institute (EPI) published a report that suggested districts invested very little new money into the core of the regular classroom from 1967 to 1991. The bulk of new education dollars over the past 15 years has not been spent on the 80% of children in the regular educational program. Instead, districts added administrative, specialist, and support staff outside this core to serve both regular and targeted populations of students.³²³ This adding of resources around, instead of into, the regular education classroom created schools that, in 1991, looked more fragmented and specialized than the schools in 1967. The doubling of per-pupil expenditures from 1967 to 1991 was the cost of piecemeal addition of programs, personnel, and resources. Reports by the Consortium on Productivity in Schools and the Economic Policy Institute concluded that educational funding for the regular education student had hardly risen.

This raises the question of whether spending the bulk of new educational dollars on areas outside the regular program is the wisest strategy if the goal is to teach nearly all children to high academic standards.³²⁴

CPRE studied resource-allocation decisions at 31 elementary schools in eight states, including Florida. The schools were using student-achievement data to decide how to use discretionary funds, whether for professional development or for allocation of new staff.³²⁵ Schools in the CPRE study tended to use quantity over quality. Instructional aides were hired to expand reading services in every classroom instead of using certified teachers for intermittent, but more “expert” classroom coverage. Schools with considerable budgetary authority generally used their resources in the same way as schools with more limited flexibility. Deregulation and decentralization offered no guarantee that schools were meeting students’ and taxpayers’ needs.³²⁶ Researchers have found only a weak link between school based management and student achievement.³²⁷

Equity of resources and relative equity in per-pupil spending among all state districts for 1992 was reported in Quality Counts, A Report Card on the Condition of Public Education in the 50 States.³²⁸ The GAO measurement of equity, comparing the variation in spending among districts to the average district spending, was used. This index adjusted for student needs and for regional cost differences. The study results indicated most states spent more money for education than they spent 10 years ago, and these increases generally out paced inflation. However, too few of the additional dollars reached the classroom. Most of the increased spending was spent on approximately 12% of students in special education, on trying to keep up with the enrollment growth, and on rising salaries for an aging teaching force. Overall, states got a grade of C- on whether they spent enough to meet educational needs. Five states earned A’s, 20 received B’s, 17 got C’s, 7 got D’s, and one state received an F. Florida received a C+ grade for equity of

resources and had a relative equity in per-pupil spending among all state districts of 79% out of 100%.³²⁹

Picus and Nakib studied the allocation of educational resources by high-performing schools in Florida. The allocation patterns in these schools were compared with the patterns in the other high schools in the state. Seven different measures were used to compare student performance. Findings suggested that per-pupil funding and per-pupil spending for instruction was not statistically significantly higher in the high-performing schools.³³⁰

Conversely, the percentage of expenditures for instruction was lower in the high-performing high schools. This finding suggests that high-performing high schools may actually spend more money on resources not directly linked to instruction than do other high schools. A clear distinction in either the amount of money available or in the way resources were used was not demonstrated in the Picus and Nakib study. The factor that seemed to have the greatest impact on student performance was student demographic characteristics.³³¹

This finding was consistent with other studies including the results of the Coleman Report. These studies have shown that the socio-economic status of students may be more important than inputs such as per-pupil expenditures, pupil teacher ratios, experience and salary, school facilities, and administrative inputs in determining successful school performance.³³²

Standards-Based Education

Most public school reform plans have demanded new expenditures to assist students meet higher academic standards. Some claim that current academic standards

are not high enough to meet the demands of the 21st century workforce. Despite substantial increases in spending during the last several decades, there has not been a commensurate improvement in student performance as measured by scores on standardized tests.³³³

Odden argues that it may be time to redesign state and district school finance systems to align them more closely to the standards-based educational reform movement. The primary goal would be to link the finance system to a set of programmatic strategies that educate the vast majority of students to a much higher minimum level of performance. This shift would involve a number of changes in state-to-district financing. First, a foundation program providing an adequate base level of per-pupil revenues, sufficient for the average school to teach the average child to high performance standards, was required. Second, additional funds for students with low-income backgrounds, students with disabilities, and students with limited English proficiency to support the extra services needed to have these students also learn to the same high standards was required. Third, price adjustments to ensure equal purchasing power of the educational dollar across geographical areas was required. Odden also recommended three changes to district financing policies including formulas to budget the bulk of district dollars to schools in a lump sum, changes in teacher compensation, and school-based performance incentives.³³⁴

Performance-Based Funding

Scholars have debated the comparability and validity of school finance studies. However, it is clear that measures of student performance have not increased at the same rate as spending. Most of the research on this issue focused on production function

analyses that attempted to relate educational inputs to schooling outcomes. Among the most common outcomes were the results of standardized tests, graduation rates, drop out rates, and labor market outcomes.³³⁵

Statistical confirmation that high spending provided better opportunities for learning and student achievement has been difficult to develop. The results of the studies linking inputs and outputs have varied. Knowing if high-performing schools utilized resources differently than other schools would be instructive in the discussion of whether or not money matters. Some have suggested school accountability should be measured by student outcomes instead of how school funds are allocated.³³⁶

To determine if money matters, the links between educational resources and student outcomes must be substantiated. Discussions on the effect of resources on student achievement have been based on the production approach. However, most efforts to define an educational production function have not been successful. Despite the general belief that more money for public schools translates to improved student performance, the statistical evidence of a relationship between spending and student outcomes has been mixed.³³⁷

Research by Hanushek concluded that U.S. schools have not used fiscal resources well. He found no strong or systematic relationship between school expenditures and student performance.³³⁸ Student performance has remained flat while spending has increased dramatically. Based on current evidence, Hanushek maintains that providing more resources for schools without other fundamental changes does not translate to improvements in student performance. These studies demonstrated that neither a strong or consistent relationship existed between student performance and school resources after variations of family input are taken into account. This inefficiency in public schools

implied that spending and resource measures have not accurately captured variations in school quality. Efficient spending was assumed in most studies of educational finance programs so that expenditure variations could be used to gauge the distribution of educational services. Hanushek's evidence points to substantial inefficiency in the production of educational quality. If expenditure was not a good measure of educational quality, equity discussions based on expenditure can be misleading. These studies suggest that simple resource policies had limited value for improving student outcomes.³³⁹

Hanushek claimed that school finance discussions based on the distribution of educational inputs have little relationship to the distribution of educational outputs. School finance plans that included incentive schemes based on student performance were generally not compatible with policies involving adequacy or input floors. Hanushek suggested America's schools needed a new process of policy determination including a focus on efficient use of both new and existing resources, the introduction of some form of performance incentives, and a commitment to experimentation and evaluation of results.³⁴⁰

Contrary to Hanushek's findings, research by Ferguson suggested that money affected student performance. Ferguson analyzed test scores and other district level data in Texas to determine why some districts performed better than others. Districts with lower estimated spending had lower test scores after all else was held constant. The reason he suggested was that wealthier districts appeared to spend more on smaller class sizes. These districts also hired more educated and better prepared teachers.³⁴¹ Ferguson concluded in his study of spending and the use of educational resources in Texas,

hiring teachers with stronger literacy skills, hiring more teachers (when students per-teacher exceed 18), retaining experienced teachers, and attracting more teachers with advanced training are all measures that produce higher test scores in exchange for more money.³⁴²

Ferguson's findings also suggested that the teachers' selection of districts in which they want to teach was affected by several factors. They included the educational level of the adults in the community, the racial composition of the community, and the salaries in other districts and alternative occupations. According to Ferguson, this implied that better teachers will tend to move to districts with higher socioeconomic characteristics if salaries were equal. If teacher skills and knowledge affect student achievement, then low socioeconomic areas may have to offer higher teacher salaries to attract and retain high quality instruction. Ferguson's research strengthened the link between expenditures and student achievement.³⁴³

Increasingly, states are developing funding mechanisms that link performance to the budget. Many state legislatures and educational experts believe that a portion of educational funding should be distributed on the basis of performance. The desire to preserve equity in the educational system inhibits the distribution of school funds based only on the basis of performance. However, some states have used the budgeting process to financially reward or sanction schools. Some policy makers believe equity may not be jeopardized if the proportion of the funding distributed on the basis of performance is limited. Nonfinancial incentives and disincentives may also be implemented without effecting equity.³⁴⁴

The state constitution required Florida to adequately provide for a uniform system of free public schools.³⁴⁵ The FEFP was designed to distribute funds according to inputs. Performance-based program budgeting was based on outputs. Maintaining

equity may limit the ability of Florida's legislature to distribute funds primarily on the basis of performance.

Florida was one of 13 states, of this writing, that have adopted incentives to distribute financial incentives and disincentives. These states include Connecticut, Georgia, Illinois, Indiana, Kentucky, Maryland, Michigan, Mississippi, North Carolina, South Carolina, Tennessee, and Texas. The type of incentive varied with each state. The percentage of total public school funding distributed through these initiatives has been typically one percent or less of state budgets.³⁴⁶

Facilities

Public schools have been confronted with a facility crisis that has created a demand on financial resources. The GAO report issued in 1998 estimated that \$121 billion was needed to upgrade or repair aging facilities to good condition and comply with federal mandates. Throughout the country, school districts have operated with buildings that are unsafe, inadequate, inaccessible, and unable to meet current technology demands. Class size reduction initiatives have also increased the demand for classroom facilities.³⁴⁷

This federal report claimed states have done little to build schools and repair the nation's infrastructure. State legislatures appropriated \$3.5 billion for school construction in 1994, a fraction of the \$121 billion needed. Only 13 states had comprehensive school facilities programs that provided funding and technical assistance to districts while also collecting data about the condition of buildings. Building schools has traditionally been the job of local districts, which paid approximately 80% of building costs. However, recent court rulings in Texas, Ohio, and Arizona have

highlighted the poor condition of school facilities in declaring the states' school finance systems unconstitutional and prompted some states to assume some responsibility. In Florida, efforts to shrink government have resulted in a 50% cut of facilities staff in the state education department.³⁴⁸

Honeyman reported in 1990 that it appeared that there was no single, equitable solution to the growing school facility problem throughout the 50 states, short of full state funding for school construction. The problem with school facilities could be attributed to the manner in which school districts funded capital outlay and the extent to which approval was contingent on approval by local taxpayers. Honeyman also observed that federal assistance may be necessary because it was doubtful whether enough money existed at the state level to correct the facilities situation.³⁴⁹ Honeyman reported in 1995 that "for almost 12 to 15 years, we have been doing research on the condition of schools. And in the 15 years, the situation has simply gotten worse."³⁵⁰ In response to the push for local control of facilities, Honeyman said, "Facilities are one of the things you can turn over to the districts and say, 'Let the locals do it.'"³⁵¹

School-Based Budgeting

School-based budgeting shifted decision-making responsibilities from the district to the school and community level. Some experts believed that site-level budgeting had the potential to encourage innovation, enhance organizational effectiveness, and improve financial equity among schools.³⁵²

Other researchers suggested that low achieving schools deserved additional funds to improve student performance. Educational programs designed to improve opportunities for groups of students with special needs were based on the premise that

additional resources were critical to their success. Advocates have suggested that to ensure students in poor schools have the opportunity to achieve at high levels, it may be necessary to add an additional \$5000 per student.³⁵³

The results of a Mellon Foundation study of school-based budgeting in four large urban school systems, Chicago, Fort Worth, New York, and Rochester, were not encouraging.³⁵⁵ In these four cities, school-based budgeting occurred at the margins, since the district limited the schools' discretion to allocated funds and personnel.³⁵⁰ Monies were used in the traditional ways to reduce class size, expand social services, enrich art and music programs, and purchase equipment and materials. Funds were not used for major program restructuring. Furthermore, regardless of the participatory structures implemented, principals retained considerable power over expenditures. Equity remained a problem. In all four districts, researchers found a "negative relationship between average teacher salaries and percentages of poor, and sometimes minority, students."³⁵⁶

Local Property Tax

Equity becomes an issue when states eliminate property taxes. In 1993, Michigan replaced the property tax based system with one financed largely by an increase in state sales tax. Since this move to abolish the local property tax, similar legislative initiatives and proposed constitutional amendments in other states have increased. This escalation of taxation issues is of concern because 40% of real wealth, on the average, in each state is in local property tax, and these revenues are a substantial tax base for schools.³⁵⁷

Odden commented that the Michigan legislation was the first time a state eliminated a property tax as a fiscal support for schools without creating a strategy for revenue replacement at the same time. Odden also offered three additional comments on

revenue sources. First, eliminating property tax for schools and replacing it solely with state money was a bad idea. Second, some significant amount of property tax for schools should be retained because these taxes have been a stable revenue provider. Third, local revenue raising mechanisms should be included in school finance formulas.³⁵⁸

Campbell presented the argument for local property tax financing of public schools by claiming property tax financing provided stronger incentives for better teacher performance and educational programs, compared to school budgets determined solely by a formula for distributing state revenue. He claimed local property tax financing directly and indirectly affected the quality of public schools in three ways. First, the quality of public schools impacted real estate prices and the volume of new construction. Where schools were good, housing prices were relatively high and new construction relatively strong. Conversely, poorer schools created less demand for housing, causing lower prices and less construction. Second, school personnel had incentives because their salaries were tied to local revenues. Good schools attracted more people, which increased property ownership and in turn raised the total assessed value of property. Third, increases in property values made it easier to raise school budgets and teachers' salaries by avoiding increases in the property tax rate. This relationship between property values and school budgets did not exist where school spending was determined by the state and funded with state revenues.³⁵⁹

The Shift from Equity to Adequacy

The next frontier in school finance is guaranteeing adequacy in education. Equity and adequacy are becoming inextricably linked. Historically, the concepts of equal educational opportunity have evolved from access to schooling, to equal spending per-pupil, to variable spending per-pupil depending on individual educational needs. Equity

in school funding has driven state subventions to narrow the disparities in funding that resulted from reliance on local property taxes. This pursuit of equity has produced equality of funding, but some claim at a level inadequate to provide needed programs and services for children.³⁶⁰

Researchers continue to refine what constitutes an acceptable education for students. Equity, or fairness, has traditionally been the “gold standard” for school funding. Increasingly, adequacy issues have begun to dominate school finance discussions around the central question, “How much should an education cost?” Much of the current emphasis on sufficiency in funding has been driven by the courts. Several states have struggled to define adequacy in response to rulings issued over the past 10 years in school finance lawsuits. An equally important impetus for the shift from equity to adequacy has been the national movement to raise standards and to compel schools to meet them.³⁶¹

At least four distinct approaches to adequate education have emerged. All were block grant formulas that gave districts a lump sum of money. The first was the “expert design” approach, developed by Guthrie and Rothstein for Wyoming, which used panels of experts to determine what approach worked best. The second approach, developed by Augenblick for Ohio and also used in New Hampshire and Mississippi, used high-performing districts to set funding levels. The assumption with this model was that districts receiving similar amounts of dollars to high-performing districts could produce the same results. The third approach was a statistical, econometric approach in which a cost index linked to specific levels of performance in districts with certain characteristics was determined. The fourth “successful schools” approach, advocated by Odden, based school costs on exemplary school improvement models supported by the New American Schools.³⁶²

Conclusion

Federal and state funding for public schools has been under pressure. Some researchers predict that educators will have to do more with less funds. Booming student enrollments, modest income growth, and an aging population will inhibit increases in school budgets. At the same time, state policy makers are promoting various forms of tax release. The trend toward block grants has also increased the pressure on state spending since, in many cases, education competed with spending on welfare and services to children at the state level. Cutbacks in federal aid for social services will also place additional pressure to shift monies out of education. Negative public attitude toward taxes makes it difficult for public schools to maintain, much less increase spending at the local level. However, voters in the November 2000 elections in four states passed initiatives designed to send more money to schools, and voted down tax-cutting measures that opponents said would prove costly to education. These outcomes validated the recently increased emphasis placed on education.³⁶³

State funding programs warrant continued scrutiny to assure equity, particularly as performance-based program budgeting becomes increasingly popular. The public education finance forecast for the next decade includes more block grants to individual schools, new accountability systems, more state aid, fewer local dollars for education, and no lessening of court involvement. A critical finance issue for the future is for state funding mechanisms to be made an integral part of the educational reform movement.³⁶⁴

Summary

The literature relevant to the study of school finance equity was reviewed in this chapter. The main topics discussed included the history and theory of finance equity,

equity principles, the foundation method of fund distribution, an overview of FEFP, Florida's local school property tax, a review of previous equity studies on the Florida education funding system, legal principles and court cases related to equity, and finally, current issues related to equity in public school finance programs. In Chapter 3, a discussion of the state school finance system selected for the study, a description of the design of the research study, the standard statistical measures of equity applied, and the methods implemented for assessing the effects of the local discretionary levies are presented.

Notes

1. Austin D. Swanson and Richard A. King, School Finance: Its Economics and Politics, 2nd ed. (New York: Longman, 1997).
2. Ibid., 197.
3. Elwood P. Cubberly, School Funds and Their Apportionment (New York: Columbia University, 1906), 250.
4. Ibid., 16.
5. Ibid., 100.
6. Ibid., 17.
7. Ibid., 219.
8. James G. Ward and William E. Camp, "An Analytic View of Two Decades of Reform in School Finance: Some Comments," Journal of Education Finance 14 (Summer 1988): 272.
9. George D. Strayer and Robert M. Haig, The Financing of Education in the State of New York, vol. 1 (New York: Macmillan, 1923).
10. Ibid., 174.
11. Ibid., 174-175.
12. Ibid., 175-176.

13. Harlan Updegraff, Rural School Survey of New York State: Financial Support (Ithica, NY: The Joint Committee on Rural Schools, 1922) 136.
14. Harlan Updegraff and Leroy King, Survey of the Fiscal Policies of the State of Pennsylvania in the Field of Education (Philadelphia: University of Pennsylvania, 1922), 119-122.
15. Strayer and Haig, The Financing of Education, 173-174.
16. James W. Guthrie, Walter I. Garms, and Lawrence C. Pierce, School Finance and Education Policy: Enhancing Educational Efficiency, Equality, and Choice (Englewood Cliffs, NJ: Prentice Hall, 1988), 135.
17. Paul Mort, The Measurement of Educational Need (New York: Teachers College, Columbia University, 1924), 1.
18. Ibid., 6.
19. Ibid., 6-7.
20. Kern Alexander and Richard G. Salmon, Public School Finance (Needham Heights, MA: Allyn and Bacon, 1995), 69.
21. Paul Mort, State Support for Public Schools (New York: Teachers College, Columbia University, 1926), 16.
22. Mort, The Measurement of Educational Need, 63-66.
23. Roe L. Johns and Edgar L. Morphet, The Economics and Financing of Education, 3d ed. (Englewood Cliffs, NJ: Prentice-Hall, 1975), 234.
24. Henry Morrison, School Revenue (Chicago: University of Chicago Press, 1930), 214.
25. Ibid., 164.
26. Ibid., 195.
27. Ibid., 208-214.
28. Ibid., 155.
29. D. Raphael, Problems of Political Philosophy (London: Macmillan, 1976), 172.
30. Ibid.

31. Ibid.

32. James Coleman, "The Concept of Equality of Educational Opportunity," Harvard Educational Review 38 (Winter 1968): 17-22; Arthur E. Wise, Rich Schools, Poor Schools: The Promise of Equal Educational Opportunity (Chicago: University of Chicago Press, 1968), 147.

33. R. Freeman Butts and Lawrence Cremin, A History of Education in American Culture (New York: Henry Holt and Company, 1953), 185.

34. John Rawls, A Theory of Justice (Cambridge, MA: The Belknap Press of Harvard University, 1971), 507.

35. Thomas Jefferson, The Writings of Thomas Jefferson (New York: The Library of America, 1984).

36. Alexander and Salmon, Public School Finance, 13.

37. Garms, Guthrie, and Pierce, The Economics and Politics of Public Education, 130; Charles S. Benson, The Economics of Public Education, 3d ed. (Boston: Houghton Mifflin, 1978), 257-258; Percy E. Burrup, Vern Brimley, Jr., and Richard Garfield, Financing Education in a Climate of Change, 5th ed. (Boston: Allyn and Bacon, 1993), 9-15; Swanson and King, School Finance: Its Economics and Politics, 2nd ed., 240-257.

38. Robert Berne and Leanna Stiefel, The Measurement of Equity in School Finance (Baltimore: The Johns Hopkins University Press, 1984), 12.

39. Ibid.

40. David H. Monk, Educational Finance: An Economic Approach (New York: NY: McGraw-Hill, 1990), 44.

41. Berne and Stiefel, The Measurement of Equity in School Finance, 13.

42. Ibid.

43. Stephen J. Carroll and Rolla E. Park, The Search for Equity in School Finance (Cambridge, MA: The Ballinger Press, 1983), 29.

44. Berne and Stiefel, The Measurement of Equity in School Finance, 9.

45. Garms, Guthrie, and Pierce, The Economics and Politics of Public Education, 130.

46. Ibid., 301.

47. Ibid., 302.

48. Ibid.

49. Ibid., 79-81.

50. Ibid.

51. Ibid., 5.

52. Ibid., 300.

53. Ibid.

54. Ibid., 87.

55. David C. Thompson, R. Craig Wood, and David S. Honeyman, Fiscal Leadership for Schools: Concepts and Practices (White Plains, NY: Longman, 1994), 219.

56. Ibid.

57. Alexander and Salmon, Public School Finance, 201.

58. Paul Mort and Walter C. Reusser, Public School Finance (NY: McGraw-Hill, 1951), 397-400.

59. Swanson and King, School Finance: Its Economics and Politics, 2nd ed., 202.

60. Ibid.

61. Roe L. Johns, Edgar L. Morphet, and Kern Alexander, The Economics and Financing of Education, 4th ed. (Englewood Cliffs, NJ: Prentice Hall, 1983), 198-199.

62. Swanson and King, School Finance: Its Economics and Politics, 2nd ed., 202.

63. Ibid.

64. Ibid.

65. Ibid.

66. Thompson, Wood, and Honeyman, 220; Swanson and King, School Finance: Its Economics and Politics, 2nd ed., 202.

67. Swanson and King, School Finance: Its Economics and Politics, 2nd ed., 202.

68. Thompson, Wood, and Honeyman, 223.

69. Steven D. Gold, David M. Smith, Stephen B. Lawton, and Andrea Hyary, eds., Public School Finance Programs of the United States and Canada, 1993-94, vol. 1 and 2 (New York: American Education Finance Association, Nelson A. Rockefeller Institute of Government, 1995), 196; Thompson, Wood, and Honeyman, 224.
70. Gold, Smith, Lawton, and Hyary, eds., Public School Finance Programs, 22-23.
71. Deborah A. Verstegen, School Finance at a Glance (Denver, CO: Education Commission of the States, 1990), 2.
72. Stephen J. Carroll, The Search for Equity in School Finance: Results from Five States (Santa Monica, CA: The Rand Corporation, 1979), 4.
73. Thompson, Wood, and Honeyman, Fiscal Leadership, 227-231.
74. Ibid., 223-224.
75. Ibid., 223.
76. Ibid.
77. Alexander and Salmon, Public School Finance, 203.
78. Fla. Stat. sec. 236.012.
79. Florida Department of Education, Florida Education Finance Program, 1996-97, Statistical Report. Tallahassee, FL, 1- 4.
80. Ibid., 14.
81. Ibid., 20-21.
82. Lee A. Shiver, A Historical Review of the Development of Florida's School Finance Plan and the Fiscal Equalization Effects of the Florida Education Finance Program, Doctoral Dissertation, University of Florida, 1982, 31-34.
83. Laws of Florida (1851), Chapter 343, p. 104 cited in Pyburn, 56.
84. Shiver, 37.
85. Ibid., 39.
86. Ibid., 47.
87. Ibid., 53.

88. Ibid.

89. Ibid., 41-42

90. A. D. Pollock, The Evolution of the Organizational Structure of Local Public Education in Florida 1945-47 (Doctoral Dissertation, Florida State University, Tallahassee, Florida, 1969), 94.

91. Roe L. Johns, The Evolution of the Equalization of Educational Opportunity in Florida 1926 to 1976 (Gainesville, FL: Institute for Education Finance, 1976), 34-35.

92. Shiver, 62.

93. Ibid., 64-65.

94. Johns, 196.

95. J. W. Seay, "Florida," in Education in the States: Nationwide Development Since 1900 (Washington, DC: National Education Association of the United States, 1969), 244.

96. Shiver, 69-70.

97. For a full description of the FEFP, see Fla. Stat. sec. 236.081 (1996)

98. Florida Education Finance Program, 1996-97, Statistical Report (Tallahassee, FL: Florida Department of Education, 1997), 9.

99. Ibid., 10.

100. Ibid.

101. Ibid., 1

102. Fla. Stat. sec. 236.081(1)

103. Id.

104. Florida Education Finance Program, 1996-97, Statistical Report (Tallahassee, FL: Florida Department of Education, 1997), 12.

105. Ibid., 23.

106. Fla. Stat. sec. 236.081(2) (6) (7)

107. Florida Education Finance Program, 1996-97, Statistical Report (Tallahassee, FL: Florida Department of Education, 1997), 15

108. Ibid., 25.

109. Ibid., 16, 25.

110. Ibid., 17, 26.

111. Ibid., 17, 25.

112. Ibid., 18, 25.

113. Ibid., 18, 24.

114. Ibid., 18, 26.

115. Ibid., 20-21, 28.

116. Ibid., 28.

117. Ibid., 19.

118. Fla. Stat. sec. 236.25 (1) (2)

119. Florida Education Finance Program, 1996-97, Statistical Report (Tallahassee, FL: Florida Department of Education, 1997), 23.

120. Florida Legislature, Office of Program Policy Analysis and Government Accountability, Florida's Education Funding System, Report No. 95-50 (Tallahassee, FL: Florida Legislature, Office of Program Policy Analysis and Government Accountability, April 8, 1996), 1-2; National Center for Education Statistics, The Digest of Education Statistics (Washington DC: Government Printing Office, 1994), Table 166.

121. Ibid.; Ibid., 24.

122. Ibid., 1-2; Florida Education Finance Program, 1996-97, Statistical Report (Tallahassee, FL: Florida Department of Education, 1997), 23.

123. Fla. Const. Art. VII sec. 9 (a)

124. Fla. Stat. sec. 200.001(3)(a)

125. Fla. Stat. sec. 200.001(3)(b)

126. Fla. Stat. sec. 200.001(3)(c)

127. Fla. Stat. sec. 200.001(3)(d)

128. Fla. Stat. sec. 200.001(3)(d)

129. Fla. Stat. sec. 200.001(3)(e)

130. Fla. Stat. sec. 200.001(3)

131. Fla. Const. art. VII sec. 9(a)

132. Florida Education Finance Program, 1996-97, Statistical Report (Tallahassee, FL: Florida Department of Education, 1997), 2.

133. Fla. Stat. sec. 236.25

134. Florida Education Finance Program, 1996-97, Statistical Report (Tallahassee, FL: Florida Department of Education, 1997), 2.

135. Ibid.

136. Ibid.

137. Ibid. 2-3.

138. David Vaughan, "The Impact of Florida's 1973 School Finance Reform on Poor and Minority Children," in Minorities, the Poor, and School Finance Reform, ed. Robert Brischetto (Washington DC: National Institute of Education, 1979).

139. Carroll and Park, The Search for Equity in School Finance.

140. Kern Alexander and Lee Shiver, "Equalization Among Florida School Districts," Journal of Education Finance, 9 (Spring 1983): 53-62.

141. David S. Honeyman, "School Facilities and State Mechanisms that Support School Construction: A Report from Fifty States," Journal of Education Finance, 16 (Fall 1990): 247-272.

142. Steven D. Stark, David S. Honeyman, and R. Craig Wood, "The Florida Lottery: Its Use as a Substitute for Existing Funds and its Effects on the Equity of School Funding," Journal of Education Finance, 18 (Winter 1993): 231-242.

143. J. Michael O'Loughlinis, The Effects of Additional Revenues for Sparsity on the Equity of a State School Finance Program (Doctoral Dissertation, University of Florida, Gainesville, FL, 1992), 133-136.

144. Gaylon D. Currie, An Examination of the Effects of Capital Outlay on Public Education: A comparison of the Equity of the Current Method of Distributing Capital Outlay Funding in the State of Florida and Equity of General Expenditures for Education (Doctoral Dissertation, University of Florida, Gainesville, FL, 1992), 161-164.

145. Susan R. Summers, An Examination of Supplantation and Redistribution Effects of Lottery Allocations to a Community College System (Doctoral Dissertation, University of Florida, Gainesville, FL, 1993), 156-166.

146. Jeffrey R. Maiden and R. Craig. Wood, "An Examination of the Discretionary Elements of the Florida Education Finance Program," Journal of Education Finance, 21 (Fall 1995), 271-290.

147. Mary L. Chambers, The Effects of Additional Revenues from Capital Outlay Transfers on the Equity of a State School Finance System (Doctoral Dissertation, University of Florida, Gainesville, FL, 1996), 93-94.

148. Lenford C. Sutton, Sr., An Examination of Exceptional Student Funding in the State of Florida (Doctoral Dissertation, University of Florida, Gainesville, FL, 1998), 117-121.

149. Rhodella Brown, A Study of Equity in a Multi-Institution Community College System Prior to and After Implementing Performance-Based Funding (Doctoral Dissertation, University of Florida, Gainesville, FL, 1999), 109-115.

150. Yasser Nakib and Carolyn D. Herrington, "The Political Economy of K-12 Education Finance: The Context of a Fast Growing Large State," Journal of Education Finance, 23 (Winter 1998): 351-373.

151. Tom Owens and Jeffrey R. Maiden, "A Comparison of Interschool and Interdistrict Funding Equity in Florida," Journal of Education Finance, 24 (Spring 1999): 503-518.

152. David C. Thompson, "School Finance and the Courts: A Reanalysis of Progress," West's Education Law Reporter, 59 (June 21, 1990): 948

153. Kern Alexander, Roe L. Johns, and K. Forbis Jordan, Financing Education: Fiscal and Legal Alternatives (Columbus, OH: Charles Merrill, 1972), 47.

154. U. S. Const. amend. XIV sec. 1

155. William E. Sparkman, "School Finance Challenges in State Courts," in The Impact of Litigation and Legislation on Public School Finance, eds. Julie K. Underwood and Deborah A. Versteegen (New York: Harper and Row, 1990), 199.

156. Ibid. , 197.

157. Ibid., 3.

158. William E. Thro, "The Third Wave: The Impact of the Montana, Kentucky, and Texas Decisions on the Future of Public School Reform Legislation," Journal of Law and Education 19 (Spring 1990): 219-250.

159. San Antonio School District v. Rodriguez, 411 U.S. 193 S. Ct. (Tex. 1973).

160. Thro, "The Third Wave," 222-225.

161. *Ibid.*, 225-232.

162. *Ibid.*, 238-250.

163. *Ibid.*, 225.

164. Helena Elementary School District v. State, 769 P.2d 684 (Mont. 1989).

165. Deborah A. Verstegen, "The New Wave of School Finance Litigation," Phi Delta Kappan (November 1994), 243-250.

166. Kern Alexander, and M. David Alexander, American Public School Law (St. Paul, MN: West Publishing, 1992), 787.

167. Julie K. Underwood, "School Finance Litigation: Legal Theories, Judicial Activism, and Social Neglect." Journal of Education Finance 20 (Fall 1994): 143-146.

168. *Ibid.*, 144-145.

169. *Ibid.*

170. *Ibid.*, 147-150.

171. Brown v. Board of Education, 347 U.S. 483, 74 S. Ct. 686 (Kansan 1954).

172. *Id.* at 493.

173. Plessy v. Ferguson, 163 U.S. 537.

174. Brown v. Board of Education, 347 U.S. 483 (Kansas 1954) at 493.

175. McInnis v. Shapiro, 293 F.Supp. 327 (Ill. 1968).

176. *Id.* at 336.

177. *Id.* at 333.

178. Burrus v. Wilkerson, 310 F. Supp. 572 (Vir. 1969).

179. *Id.* at 574.

180. San Antonio Independent School District v. Rodriguez, 411 U.S. 1 (Tex. 1973).

181. Id. at 2

182. Id. at 16.

183. Id. at 20.

184. Id. at 35.

185. Id. at 40.

186. Id. at 55.

187. Thro, "The Third Wave," 224-225; Sparkman, "School Finance Challenges in State Courts," 194.

188. Serrano v. Priest, 487 P.2d 1241 (Calif. 1972).

189. Id. at 1243.

190. Id. at 1244.

191. L. Dean Webb, Martha M. McCarthy, and Stephen B. Thomas, Financing Elementary and Secondary Education (Columbus, OH: Merrill, 1988), 258.

192. Serrano v. Priest, 226 Cal. Rptr. 584 (1976).

193. William E. Camp and David C. Thompson, "School Finance Litigation." Journal of Educational Finance 14 (Fall 1988), 222.

194. Van Dusartz v. Hatfield, 334 F.Supp 870 (Minn. 1971) at 877.

195. Id. at 877.

196. Id.

197. Robinson v. Cahill, 303 A.2d 273 (N.J. 1973).

198. Sparkman, "School Finance Challenges in State Courts," 196.

199. Robinson at 21.

200. Id. at 295. 277

201. Camp and Thompson, "School Finance Litigation," 254.

202. Milliken v. Green, 212 N.W.2d 711 (Mich. 1973).

- 203. Id., 714-716.
- 204. Id. at 720.
- 205. Thompson v. Enkelking, 537 P.2d 635 (Idaho 1975).
- 206. Id., 638-640.
- 207. Id., 641-642.
- 208. Id. at 642.
- 209. Id., 646-653.
- 210. Olsen v. State, Or. 554 P.2d 239 (Oregon 1976).
- 211. Id., 140-142.
- 212. Horton v. Meskill, 376 A.2d 359 (Conn. 1977).
- 213. Id. at 374.
- 214. Pauley v. Kelley, 255 S.E.2d 859 (W.Va. 1979).
- 215. Id., 878-883.
- 216. Id. at 877.
- 217. Board of Education of City School District, etc. v. Walter, 390 N.E.2d 813 (Ohio 1979).
- 218. Id., 819-821.
- 219. McDaniel v. Thomas, 285 S.E.2d 156 (Ga. 1982).
- 220. Id., 160-161.
- 221. Id., 164-166.
- 222. Board of Education, Levittown Union Free School Dist. v. Nyquist, 439 N.E.2d 359 (N.Y. 1982), 363.
- 223. Id. at 363-364.
- 224. Id., 368-369.
- 225. Plyler v. Doe, 457 U.S. 202, 102 S. Ct. 2382 (1982).

226. Id. at 2398.
227. Hornbeck v. Somerset County Board of Education, 458 A. 2d 758 (Md. 1983).
228. Id. at 776.
229. Id., 786-790.
230. Dupree v. Alma School District No. 30, 651 S.W.2d 90 (Ark. 1983).
231. Id. 92-93.
232. Fair School Finance Council of Oklahoma, Inc. v. Oklahoma, 746 P. 2d 1135 (Okla. 1987).
233. Id. at 1138.
234. Id., 1144-1150.
235. Richland County v. Campbell, 364 S.E. 2d 470 (S.C. 1988).
236. Id., 471-472.
237. Helena Elementary School District No. 1 v. State, 769 P.2d 684 (Mont. 1989).
238. Id. at 689.
239. Id. at 686.
240. Id., 689-690.
241. Edgewood Independent School District v. Kirby, 777 S.W.2d. 391 (Tex. 1989).
242. Id., 392-393.
243. Id., 394-398.
244. Kukor v. Grover, 436 N.W. 568 (Wis. 1989).
245. Id., 487-585.
246. Rose v. Council for Better Education, 790 S.W.2d. 186 (K.Y. 1989).
247. Id. at 189.

248. Id. at 197.

249. Id., 210-213.

250. Abbott v. Burke, 495 A.2d. 376 (N.J. 1990).

251. Id. at 363.

252. Id. at 408.

253. Id.

254. Id. at 369.

255. Id. at 368.

256. Id. at 408.

257. Id. at 363.

258. Abbott II 119 N.J. 287, 575 A. 2d 359 [60 Ed. Law Rep. [1175]], 1176.

259. Deborah A. Verstegen and Terry Whitney, "From Courthouse to Schoolhouses: Emerging Judicial Theories of Adequacy and Equity," Educational Policy 11(3) (September 1997): 340.

260. Ibid.

261. Coalition for Equitable Funding v. State, 811 P. 2d. 116 (Oregon 1991).

262. Id.

263. Gould v. Orr, 244, 633 (Neb. 1993) .

264. Id.

265. Tennessee v. Small School Systems et al V. Mc Wherter, 851 S.W. 2d. 139 (Tenn. 1993).

266. Id.

267. Verstegen and Whitney, "From Courthouse to Schoolhouses," 341-345.

268. Rodriguez, 411 U.S. 1, 93 S. Ct. 1278, 36 L.Ed. 2d 16.

269. Verstegen and Whitney, "From Courthouse to Schoolhouses," 348.

270. Pauley, 162 W. Va. 672, 255 S.E. 2d 859, 165
271. Nyquist, 439 N.E. 2d 359 (N.Y. 1982)
272. Rose, 790 S.W. 2d 186 [60 Ed. Law Rep. [1289]]K.Y. 1989) 1315.
273. Abbott II 119 N.J. 287, 575 A. 2d 359 [60 Ed. Law Rep. [1175]], 1176.
274. Alabama v. Hunt, 624 SO. 2d 107 (Ala. 1993)
275. Id.
276. Id.
277. McDuffy v. Secretary of the Executive Office of Education, 615 N.E. 2d 516 (Mass. 1993).
278. Pawtucket v. Sundlum, 662 A. 2d 40 (R.I. 1994).
279. Florida Const., Article IX, Sec. 1.
280. Gindl v. Dept. of Education, 396 So. 2^d 1105 (Fla. 1979).
281. St. Johns County, Florida v. Northeast Florida Builders Association, 583 So.2d 635, 641 (Fla. 1991).
282. Id. at 14.
283. Id.
284. Florida Department of Education v. Glasser, 622 So. 2d 944 (Fla. 1993).
285. Id.
286. The Coalition for Adequacy and Fairness in School Funding, et al., v. State of Florida, complaint 1994, para. 4, 5, 74.
287. Underwood, "School Finance Litigation," 143-144.
288. Ibid.
289. Verstegen and Whitney, "From Courthouse to Schoolhouses," 347.
290. Ibid.
291. Campbell County School District, State of Wyoming, et. al. v. State of Washington, 907 P.2d 1238 (Wy. 1995)

292. Verstegen and Whitney, "From Courthouse to Schoolhouses," 349.

293. Ibid.

294. Allan Odden, David Monk, Yasser Nakib, and Lawrence Picus, "The Story of the Education Dollar: No Academy Award and No Fiscal Smoking Guns," Phi Delta Kappan (October 1995): 163; Chris Pipher, "The New Climate for School Finance," Phi Delta Kappan 75(8) (April 1994): 584.

295. Lynn Olson, "The State of the States," Quality Counts, A Report Card on the Condition of Public Education in the 50 States, Education Week 16 (January 22, 1997), 3.

296. Helen F. Ladd and Janet S. Hansen, Editors, Making Money Matter: Financing America's Schools, Committee on Education Finance, National Research Council (Washington, DC: National Academy Press, 1999), 1-12 <http://books.nap.edu/books/039065283/html/>; Richard A. Rossmiller, "Equity or Adequacy of School Funding," Educational Policy 8(4) (December 1994): 616-625; Ron Rensler, "Financial Equity in Schools," ERIC Clearinghouse on Educational Management, Eugene, OR (January 1992). http://www.ed.gov/databases/ERIC_Digests/ed350717.html.

297. National Center for Education Statistics, The Digest of Education Statistics (Washington DC: Government Printing Office, 1994), Table 157.

298. Ladd and Hansen, Making Money Matter: Financing America's Schools, 1-12 <http://books.nap.edu/books/039065283/html/>

299. Karen S. Miles, Spending More at the Edges: Understanding the Growth in Public School Spending from 1967 to 1991, (Doctoral Dissertation, Harvard University, Cambridge, MA, 1997), 15.

300. Allan Odden, "Productive Discussions About the Education Dollar," Education Week (February 7, 1996) <http://www.edweek.org/ew/vol-15/20odden.h15>; Miles, Spending More at the Edges, 12.

301. Eric A. Hanushek, "A Jaundiced View of Adequacy in School Finance Reform," Educational Policy 8(4) (December 1994): 460-469.

302. Odden, Monk, Nakib, and Picus, "The Story of the Education Dollar," 163; Eric A. Hanushek and Steven G. Rivkin, Understanding the 20th Century Growth in U. S. School Spending (Rochester, NY: Rochester Center for Economic Research, 1994); Miles, Spending More at the Edges, 14.

303. Miles, Spending More at the Edges, 14.

304. Odden, "Productive Discussions About the Education Dollar," <http://www.edweek.org/ew/vol-15/20odden.h15>

305. National Center for Education Statistics (NCES), Digest of Education Statistics (Washington DC: Government Printing Office, 1994), Table 164, p. 163.
306. Helen F. Ladd, Rosemary Chalk, and Janet S. Hansen, eds, Equity and Adequacy in Education Finance: Issues and Perspectives, Committee on Education Finance, National Research Council (Washington, DC: National Academy Press, 1999), 1-6. <http://books.nap.edu/books/0390651/html/>
307. Robert C. Johnson, "Study Reveals Gaps Across States," Education Week XVI(25) (March 19, 1997), 1, 30.
308. Ibid.
309. David J. Hoff, "GAO Documents Persistent School Inequities," Education Week (March 4, 1998) <http://www.edweek.org/ew/1998/25gao.h17>
310. Robert C. Johnson, "Report Finds No Easy Solutions for Disparities in School Funding," Education Week (January 24, 1998) <http://www.edweek.org/ew/1998/41gao.h17>; Hoff, "GAO Documents Persistent School Inequities," <http://www.edweek.org/ew/1998/25gao.h17>
311. Linda Darling-Hammond, "Unequal Opportunity; Race and Education," The Brookings Review, The Brookings Institution, 16(2) (Spring 1998), 28-32. <http://www.brook.edu/pub/review/spring98/darling.htm>
312. Ibid.
313. Deborah A. Verstegen, "Financing Education Reform: Where Did All The Money Go?" Journal of Education Finance (19) (Summer 1993), 1-35; "The New Wave of School Finance Litigation." Phi Delta Kappan (November 1994), 243-250.
314. Jonathan Kozol, Savage Inequalities: Children in America's Schools (New York: Crown Publishers, 1991).
315. Ibid.
316. Lawrence O. Picus, "Does Money Matter in Education? A Policymaker's Guide," in Selected Papers in School Finance, ed. W. Fowler (Washington, DC: National Center for Education Statistics, 1995), 20; Johnson, "Study Reveals Gaps Across States," 1, 30.
317. Odden, "Productive Discussions About the Education Dollar," <http://www.edweek.org/ew/vol-15/20odden.h15>
318. Eric A. Hanushek. Improving the Performance of America's Schools (Washington DC: National Academy Press, 1996), 4, 28-51.

319. Odden, Monk, Nakib, and Picus, "The Story of the Education Dollar," 163; Miles, Spending More at the Edges, 190; Odden, "Productive Discussions About the Education Dollar"; <http://www.edweek.org/ew/vol-15/20odden.h15>

320. Miles, Spending More at the Edges, 190.

321. Stephen M. Barro, "What Does the Education Dollar Buy?: Relationships of Staffing, Staff Characteristics, and Staff Salaries to State Per-pupil Spending" (Los Angeles, CA: The Finance Center of Consortium for Policy Research and Evaluation (CPRE), Working Paper, 1994).

322. National Center for Educational Statistics, 1994.

323. Richard Rothstein and Karen S. Miles, Where's The Money Gone? (Washington, DC: Economic Policy Institute, 1995).

324. Hanushek and Rivkin, "Understanding the 20th Century Growth in U.S. School Spending," 290; Karen Miles, Rethinking School Spending: A Case Study of Boston Public Schools (Cambridge, MA: National Center for Educational Leadership, 1993), 289; Odden, "Productive Discussions About the Education Dollar," <http://www.edweek.org/ew/vol-15/20odden.h15>; Robert C. Johnson, "Study Documents Shifts in Districts' Spending," Education Week (January 14, 1998) <http://www.edweek.org/ew/vol-17/18spend.h17>

325. Margaret E. Goertz and Mark C. Duffy, "Resource Allocation in Reforming Schools and School Districts," in School-based Financing (Twentieth Annual Yearbook of American Education Finance Association), ed. Margaret E. Goertz and Allan Odden (Thousand Oaks, CA: Corwin Press, 1999), 215-241.

326. Margaret E. Goertz and Leanna Stiefel, "School-Level Resource Allocation in Urban Public Schools. Introduction to Special Issue," Journal of Education Finance 23 (4) (Spring 1998): 435-446.

327. Allan Odden, Priscilla Wohlstetter, and Eleanor Odden, "Key Issues in Effective Site-Based Management," School Business Affairs 61(5) (May 1995): 4-12, 14, 16.

328. Virginia B. Edward, ed., "Quality Counts: A Report Card on the Condition of Public Education in the 50 States." Education Week vol. 16 (January 22, 1997, supplement): 24. <http://www.edweek.org/qc97/indicators/tables/res-eq-m.htm>.

329. Ibid.

330. Lawrence O. Picus and Yasser Nakib, Resource Allocation Patterns in High-performing Florida Schools (Los Angeles, CA: Center for Research in Education Finance, 1995).

331. Lawrence O. Picus, "What Does the Money Buy? Allocation and Use of Educational Resources," School Financial Equity (August 1995): 13-21.
332. 276. J. Coleman, "The Concept of Equality and Educational Opportunity," Harvard Educational Review (Winter 1968).
333. Edward, "Quality Counts," 39.
334. Allan Odden, "Creating School Finance Policies That Facilitate New Goals," CPRE Policy Briefs, Graduate School of Education, University of Pennsylvania (September 1998), 6.
335. Larry V. Hedges, R. Laine, and R. Greenwald, "Does Money Matter? A Meta-analysis of Studies of the Effects of Differential School Inputs on Student Outcomes," Educational Researcher 23(3) (1994): 9.
336. Picus, "Does Money Matter in Education?" 32.
337. David H. Monk, "Policy Challenges Surrounding the Shift Toward Outcome-Oriented School Finance Equity Standards," Educational Policy (8)4 (December 1994): 471-486.
338. Eric A. Hanushek, "The Impact of Differential Expenditures on School Performance," Educational Researcher 18(4) (1989): 45-65.
339. Eric A. Hanushek, "Assessing the Effects of Resources on Student Performance: An Update," Educational Evaluation and Policy Analysis 19(2) (Summer 1997): 141-164; Eric A. Hanushek, "A More Complete Picture of School Resource Policies," Review of Educational Research 66(3) (Fall 1996): 397-409; Eric A. Hanushek, "Measuring Investment in Education," Journal of Economic Perspectives 10(4) (Fall 1996): 9-30.
340. Eric A. Hanushek. Improving the Performance of America's Schools (Washington, DC: National Academy Press, 1996); "A Jaundiced View of Adequacy in School Finance Reform." 460-469.
341. Richard Ferguson, "Paying for Public Education: New Evidence on How and Why Money Matters," Harvard Journal of Legislation (Summer 1991): 28.
342. Ibid, 485.
343. Ibid.
344. Lawrence O. Picus, "Achieving Program Equity: Are Markets the Answer?" Educational Policy, 8(4) (December 1994): 568-581; Office of Program Policy Analysis and Government Accountability, Public Schools and Performance-Based Program Budgeting. Tallahassee, FL: Report No. 97-35 (January, 1998), 18, 33-36.

345. Fla. Const. art. IX sec. 1.

346. Office of Program Policy Analysis and Government Accountability, Public Schools and Performance-Based Program Budgeting. Tallahassee, FL: Report No. 97-35 (January 1998), 18, 33-36.

347. Lynn Olson, ed., "Keeping Tabs on Quality. Quality Counts, A Report Card on the Condition of Public Education in the 50 States," Education Week 16 (January 22, 1997), 16.

348. Drew Lindsay, "States Do Not Spend Enough to Fix, Build Schools, Report Says," Education Week, 16 (January 10, 1996)
<http://www.edweek.org/ew/1996/16gao.h15>

349. David S. Honeyman, "School Facilities and State Mechanisms That Support School Construction: A Report from the Fifty States," Journal of Education Finance (Fall 1990): 247-271.

350. David S. Honeyman, as cited in "Keeping Tabs on Quality," Quality Counts. A Report Card on the Condition of Public Education in the 50 States, ed. Lynn Olson, Education Week 16 (January 22, 1997), 16.

351. Lindsay, "States Do Not Spend Enough to Fix, Build Schools, Report Says,"
<http://www.ed.week.org/ew/1996/16gao.h15>

352. Priscilla Wohlstetter and Amy Van Kirk, "School-Based Budgeting: Organizing for High Performance." Paper presented at the annual American Educational Research Association Conference, San Francisco (April 1995), 34 pages.

353. William H. Clune, "The Shift from Equity to Adequacy in School Finance," Educational Policy 8(4)(December 1994): 376-391; "The Cost and Management of Program Adequacy: An Emerging Issue in Educational Policy and Finance," Educational Policy, 8(4) (December 1994): 365-375.

354. Margaret E. Goertz and Leanna Stiefel, "School-Level Resource Allocation in Urban Public Schools. Introduction to Special Issue," Journal of Education Finance 23(4) (Spring 1998): 435-446.

355. Margaret E. Goertz and G. Alfred Hess, Jr., "Process and Power in School Budgeting Across Four Large Urban Districts," Journal of Education Finance 23(4) (Spring 1998), 490-506.

356. Leanne Stiefel, Ross Rubenstein, and Robert Berne, "Intra-District Equity in Large Cities: Data, Methods, and Results," Journal of Education 23(4) (Spring 1998): 447-467.

357. Lonnie Harp, "Michigan Law Bans Property Tax Use to Fund Schools," Education Week (August 4, 1993) <http://www.edweek.org/ew/1993/40prop.h12>; Lonnie Harp, "Michigan Officials Scramble in Wake of Property-Tax Decision," Education Week (September 8, 1993) <http://www.edweek.org/ew/1993/01ich.h13>

358. Allan Odden, "Funding Crisis Forces Action in Michigan," NCREL Policy Seminar (Winter 1994) <http://www.ncrel.org/sdrs/areas/issues/envrnmnt/go/94-wodd.htm>

359. Colin E. Campbell, "An Argument for Local Property Tax Financing of Public Schools," Research Note, Josiah Bartlett Center for Public Policy, Concord, NH (January 1999) <http://www.jbartlett.org/campbell.html>

360. Rossmiller, "Equity or Adequacy of School Funding," 616-625.

361. Debra Viadara, "How Much is Enough?" Education Week (September 29, 1999) http://www.edweek.org/ewew_printstory.cfm?slug=05financ.h19

362. John G. Augenblick, John L. Myers, and Amy Berk Anderson, "Equity and Adequacy in School Funding," Financing Schools 7(3) (Winter 1997): 63-78; Odden, "Productive Discussions About the Education Dollar" <http://www.edweek.org/ew/vol-15/20odden.h15>; Pipho, "The New Climate for School Finance," 582-584.

363. Jessica L. Sandham, "State Voters OK More Spending for Education," Education Week (November 15, 2000) <http://www.edweek.org/ew/ewstory.cfm?slug=11ballot.h20&keywords=Education%20Financ>; Darcia Harris Bowan, "Arizona Leaders urge Tax Hike for Education," Education Week, (April 5, 2000) http://www.edweek.org/ew/ew_printstory.cfm?slug=30ariz.h19; Debra Viadara, "Under Threat of Closings, N. H. Revives Property Tax," Education Week (November 10, 2000); http://www.edweek.org/ew/ew_printstory.cfm?slug=11nh.h19

364. Odden, Monk, Nakib, and Picus, "The Story of the Education Dollar," 161-168.

CHAPTER 3 RESEARCH METHODOLOGY

Introduction

The purpose of this research was to determine the effects of revenues raised through local discretionary millage rates on the fiscal equity of a foundation school distribution system. The focus of this examination was on the disequalizing effects of the revenue generated when the three types of discretionary tax millage, which may be levied by local school districts, were applied. The discretionary millage included capital outlay/maintenance, current operating, and supplemental discretionary.¹ This study addressed the effects of this millage on the equity of the FEFP.

The chapter begins with a discussion of the state school finance system selected for the study. Following this discussion is a description of the design of the research study. The standard statistical measures of equity applied in this study are then presented. The chapter concludes with a review of the methods implemented for assessing the effects of the local discretionary levies.

Study Population: Florida

The system for distributing funds to public schools in Florida was selected for this study. The rationale for this selection was based on five key points.

First, Florida was significant from a national perspective because it had the fourth largest public school population in the United States with over 2.3 million students in

elementary and secondary schools. Both the state population and the student membership in its schools have grown steadily since 1970. Although national school enrollments have declined over the past three decades, enrollment in Florida schools has steadily increased.²

Second, Florida has great economic diversity among its 67 districts as well as a wide range of student needs within its population. These factors can have disequalizing effects on a finance system.

Third, Florida's distribution system for educational funds has relevance to the issue being researched because of its minimum foundation component. The foundation model was the most prevalent system implemented in educational finance programs across the nation.³ Since the Florida Education Finance Plan was a foundation model, the study would be of interest beyond the state of Florida. Additionally, the potential for inequity existed within this plan because of the authority local school districts had to tax property, and that some of these levies were not equalized by the state.

Fourth, an examination of equity effects in this study could be enlightening as legal questions were raised about the effects of discretionary local millage on the equity of the state educational finance plan. Educational finance literature indicated a trend in litigation against state educational finance systems. Those systems with greater equalization may better withstand constitutional challenges.⁴ The equity effects detailed in this study may be relevant in future legal cases involving educational equity issues.

Fifth, outcomes of earlier studies of Florida's educational finance plan verified that the system was comparatively equitable.⁵ These results provided a basis on which to expand the examination of the effects of discretionary levies when applied to a foundation program.

Sixty-seven school districts existed within the state of Florida congruent geographically with the 67 counties in the state. Each school district was governed by an elected local school board that had the authority to levy discretionary tax millage. The state implemented a minimum foundation program which equalized per-pupil revenues to ensure districts had a minimum level of funds regardless of a district's wealth or fiscal capacity. The foundation program was capped because the overall level of funds that districts could raise beyond the minimum was restricted. Each district was given local discretion to raise local revenues to reach the state determined maximum funding level. Local districts had the authority to raise discretionary levies, including the capital outlay/maintenance, discretionary current operating, and supplemental discretionary. These three discretionary levies required school board approval, but not the approval of the electorate. In addition, the state equalized only the supplemental discretionary levy.⁶ Consequently, revenues generated by these levies could have a disequalizing effect on the state educational funding system. This study was designed to examine the effects of the discretionary tax levies on the educational finance program in Florida.

Research Design

The purpose of this study was to answer the research question, "How does the additional revenue generated by the discretionary and unequalized local levies affect equity in a foundation educational funding distribution system?" To answer this question, the three standards of horizontal fiscal equity, i.e., resource accessibility, wealth neutrality, and tax yield, were applied and per-pupil revenues were examined.

Table 3-1. Research Design

Level	Per-pupil Equity Examined	Measured
1	Base FEFP	Baseline data established to determine extent of disequalization by assessment of local discretionary levies
2	Base + Capital Outlay/ Maintenance	Relative degree of fiscal inequity when capital outlay/maintenance millage was applied and compared with Base FEFP
3	Base + Discretionary Current Operating	Relative degree of fiscal inequity when capital outlay/maintenance millage was applied and compared with Base FEFP
4	Base + Supplemental Discretionary	Relative degree of fiscal inequity when supplemental discretionary millage was applied and compared with Base FEFP
5	Base + Capital Outlay/ Maintenance + Discretionary Current Operating	Relative degree of fiscal inequity when a combination of capital outlay/maintenance millage and current operations millage was applied and compared with Base FEFP
6	Base + Discretionary Current Operating + Supplemental Discretionary	Relative degree of fiscal inequity when a combination of the current operation and supplemental discretionary millage was applied and compared with Base FEFP
7	Base + Capital Outlay/ Maintenance + Supplemental Discretionary	Relative degree of fiscal inequity when a combination of the capital outlay and supplemental discretionary millage was applied and compared with Base FEFP
8	Base + Capital Outlay/ Maintenance + Discretionary Current Operating + Supplemental Discretionary	Total degree of fiscal inequity when the combination of the Capital Outlay/ Maintenance, Discretionary Current Operating, and Supplemental Discretionary was applied and compared with Base FEFP

In educational finance, fiscal equity was the fair distribution of fiscal resources.⁷

To determine the degree to which the distribution was equitable, per-pupil revenues were examined. Per-pupil revenues were selected as the measurement object because they were directly linked to the millage rate funding source. In the current study, per-pupil revenues represented the resources expended to support education. Per-pupil revenues were studied relative to levels of aggregation to determine the extent of the effects the revenue generated by the capital outlay/maintenance, discretionary current operation, and supplemental discretionary millage had on the equity of the finance plan. Each level of aggregation measured the degree of inequity that resulted when the single discretionary levy being studied or a combination of these levies was applied.

Aggregate level one provided the baseline for determining the extent of disequalization resulting from the application of the three discretionary levies. The relative degree of fiscal inequity created by each of the discretionary levies was measured in aggregate levels two, three, and four. The relative degree of fiscal inequity resulting from various combinations of the three discretionary levies with per-pupil revenues was measured in aggregate levels five, six, and seven respectively. The total degree of fiscal inequity resulting from a combination of the capital outlay/maintenance, discretionary current operation, and supplemental discretionary millage with the base was measured in aggregate level eight.

In summary, the research design consisted of the assigning of the per-pupil revenue, the three discretionary levies, and various combinations of all to the aggregate levels. Measures of equity were applied across these eight levels of aggregation to determine the degree of fiscal inequity. The difference in the values of the measures of equity among the various levels represented the effects of discretionary levies on the

equity of the FEFP. The three standards of fiscal equity, resource accessibility, wealth neutrality, and tax yield, were also applied to these aggregate levels.

This section described the research design for the study. A discussion of the common set of statistical tools used to measure the equity performance of the FEFP and the concepts of resource accessibility, wealth neutrality, and tax yield follows.

Statistical Constructs

The method for measuring fiscal equity was presented in this section. Most equity measurement studies focused on the three dimensions related to horizontal equity; i.e., resource accessibility, wealth neutrality, and tax yield.⁸ The current study included these equity attributes to determine the degree of the disequalizing effect created by the discretionary levies.

Resource Accessibility

Resource accessibility referred to determining whether all students had equal access to resources.⁹ Horizontal equity, the equal treatment of equals, was measured by statistics that indicated the dispersion of values in a distribution.⁸ Fiscal equity and per-pupil equity were directly related to equal access to resources among students. Measures of equity used to assess resource accessibility included the mean, range, restricted range, federal range ratio, standard deviation, variance, and the coefficient of variation.¹⁰

The mean was a measure of the central tendency of a distribution. The formula used for the mean calculation was

$$\sum X_i \div N$$

where $\sum$ was the sum of all districts, X_i was the value of a given variable in district I, and N was the number of districts.¹¹ A mean amount of per-pupil revenues was computed at

each of the eight levels of aggregation in the current study. The statewide mean per-pupil revenues compared with district wide mean per-pupil revenues gave an indication of differences among districts in resource accessibility.

The range was a measure of the difference between the highest and lowest value in a distribution. The formula used for the range calculation was

$$\text{Highest } X_i - \text{Lowest } X_i$$

where X_i was the per-pupil revenue in district i .¹² The range, in the current study, indicated the difference between the maximum and minimum per-pupil revenues among the total number of districts. An individual range was computed at each level of the aggregate in the current study. The smaller the range, the greater the equivalence of resource accessibility. Conversely, the larger the range, the less the equivalence of resource accessibility. Important to the current study was the increase of the range after the discretionary levies were added to revenues distributed through the foundation program.

The restricted range was the difference between the 5th and 95th percentiles in a distribution. The formula for the range calculation was

$$X_i \text{ at } 95^{\text{th}} \text{ percentile} - X_i \text{ at } 5^{\text{th}} \text{ percentile}$$

where X_i was the variable considered in district i .¹³ In this study, X_i was the per-pupil revenue of the district, so the restricted range was the difference between the per-pupil revenues of the district at the 95th and 5th percentiles. The less the difference, the greater the equity. The advantage of the restricted range over the range was that it examined values more representative of the distribution because it was less influenced by outliers. In this study, a concern was the increase in the difference due to the additional discretionary levy revenues.

The federal range ratio was the restricted range divided by the value of the distribution at the fifth percentile. The formula for the range calculation was

$$X_i \text{ at } 95^{\text{th}} \text{ percentile} - X_i \text{ at } 5^{\text{th}} \text{ percentile} \div X_i \text{ at the } 5^{\text{th}} \text{ percentile}$$

where X_i was the revenue per-pupil in district i .¹⁴ In the current study a federal range ratio was calculated for per-pupil revenues at each of the levels of aggregation.

The smaller the value, the more equivalent the accessibility to resources, therefore the greater the equity. Inequity in the distribution of funds increased as federal range ratios increased.¹⁵ A concern of this study was the increase of the value of the federal range ratio because of the additional revenues associated with the discretionary levies.

The variance was the average of the squared deviations from the mean. The formula for the variance calculation was

$$\sum [P_i (X_p - X_i)^2] \div \sum P_i$$

where $\sum$ was the sum pupils in all districts, P_i was the number of students in district i , X_p was the mean revenues per-pupil for all pupils in the state, and X_i was the per-pupil revenues in district i .¹⁶ The smaller the variance, the smaller the variation in the distribution, therefore, the greater the equity. The advantage of the variance over the measures previously discussed was that the variance considered all observations. The variance was particularly useful in inferential analysis because it allowed testing for significant differences between groups. However, the variance was sensitive to outliers and was not expressed in original units.¹⁷

The variance in the distribution of per-pupil revenues was calculated at each level of aggregation. Less equivalent resource accessibility, or less equity, existed when the variance increased. A specific concern in the current study was the amount of growth of

the variance once the discretionary levies were included with the revenues distributed through the foundation program.

The standard deviation was the square root of the variance. The formula for the standard deviation calculation was

$$\sqrt{\sum [P_i (X_p - X_i)^2] \div \sum P_i}$$

where P_i was the number of pupils in district i , X_p was the mean revenue for all pupils in the state, and X_i was per-pupil revenues in district i .¹⁸ The standard deviation was based on assumptions about normal distributions in a bell curve. The advantage of the standard deviation was that the units of measurement were in the original scale and that all observations were included in the calculation.¹⁹ A standard deviation was figured for the revenues per-pupil at each of the aggregate levels in the current study. The smaller the standard deviation, the greater the resource accessibility equivalence, and therefore the greater the equity. The concern in the current study was the amount of increase in the standard deviation when the discretionary levies were combined with the revenues distributed through the foundation program.

The coefficient of variation was the standard deviation divided by the mean of the distribution. The formula for the variance calculation was

$$\sqrt{\sum [P_i (X_p - X_i)^2 \div \sum P_i] \div X_p}$$

where X_p was the mean of some variable for all districts. The coefficient of variation formula typically yielded a single value between zero and one. A decreasing value indicated increasing equity. Zero indicated perfect equity.²⁰ A concern in the current study was the amount of growth of the coefficient of variation as discretionary levies were added into the revenues distributed through the foundation program. The coefficient of variation was calculated for the per-pupil base at each aggregate level.

Although these formulas assessed the equivalence of the levels of support for education on a per-pupil basis, it was also important to determine whether differences were related to variations in wealth or other circumstances. Therefore, equity was also assessed by measuring the degree of wealth neutrality and equivalent tax yield.

Wealth/Fiscal Neutrality

Wealth neutrality, also known as fiscal neutrality, was an equity concept that was reached when the distribution of educational services was determined solely by the preferences of the taxpayers for education and not by their ability to pay, as measured by wealth, income, or some broader variable.²¹ In a wealth neutral system, the level of financial support for a student's education was not a function of the wealth of the district in which the student is educated.²²

The Pearson correlation coefficient was used to measure the relationship between per-pupil inputs of local school districts and their respective fiscal capacities. The formula for the correlation coefficient calculation was

$$P_i (X_i - X) (W_i - W) \div [\sqrt{\sum P_i (X_i - X)^2} [\sqrt{\sum P_i (W_i - W)^2}]$$

where $\sum$ was the sum of pupils in all districts, P_i was the number of pupils in district i , X_i was the expenditure per-pupil in district i , X was the mean expenditure per-pupil for all districts, W_i was the wealth per-pupil in district i , and W was the mean wealth per-pupil for all districts.

The correlation coefficient, in the analysis of public school finance, measured the relationship between measures of wealth and revenue.²³ The correlation coefficient yielded a value ranging from -1.0 to +1.0. A correlation coefficient of zero indicated wealth neutrality and no relationship between fiscal capacities of local school districts

and their per-pupil inputs. In this wealth neutral condition, the student's level of educational support was independent of local wealth. As the correlation coefficient increased, the level of wealth neutrality decreased and therefore the inequity was greater.²⁴ This statistic measured only the strength of a relationship between variables and did not measure the magnitude of the variance of per-pupil inputs among local school districts.

The correlation coefficient was calculated for each level of aggregation. Any increase in the proportion of variance in per-pupil revenues caused by local assessed valuation, when discretionary levies were added to per-pupil revenues provided by the foundation distribution system, was a concern of the current study. Any increase in the proportion of correlation indicated the discretionary levies caused a degree of disequalization.

The coefficient of determination was the second measure used in assessing the degree of wealth neutrality. This measure differed from the correlation coefficient in that it represented the percent of variation in a dependent variable explained by a predictor variable. The coefficient of determination was calculated by squaring the correlation coefficient and consequently was restricted to values between zero and one. A value of zero indicated none of the variance in the outcome variable explained by the predictor variable and a value of one indicating 100% of the variance explained by the predictor variable. Unlike the correlation coefficient, the coefficient of determination did not designate whether the relationship between the two variables was positive or negative. A value of zero indicated perfect wealth neutrality; i.e., none of the variations among districts in per-pupil revenues was attributable to variations in local wealth. Increasing coefficients indicated increasing variance as a result of local wealth, and a decrease in

wealth neutrality and equity. The percent of variation in local assessed valuation was used as the predictor of per-pupil revenues in this study. A coefficient of determination was calculated for per-pupil revenues at each level of aggregation. Any increase in the proportion of variance in per-pupil revenues as a result of local wealth after revenues generated through the application of the three discretionary levies examined in this study was analyzed.

The coefficient of determination was calculated by squaring the correlation coefficient. The formula was

$$[P_i (X_i - \bar{X}) (W_i - \bar{W}) \div [\sqrt{\sum P_i (X_i - \bar{X})^2}][\sqrt{\sum P_i (W_i - \bar{W})^2}]^2$$

where $\sum$ was the sum of pupils in all districts, P_i was the number of pupils in district i , X_i was the expenditure per-pupil in district i , $\bar{X}$ was the mean expenditure per-pupil for all districts, W_i was the wealth per-pupil in district i , and $\bar{W}$ was the mean wealth per-pupil for all districts.²⁵

The regression coefficient was the slope of the regression line relating wealth and expenditures. It measured the difference that a change in tax rate, or wealth, had on expenditures. The formula for the regression coefficient calculation was

$$\sum [P_i (X_i - \bar{X}_p) (W_i - \bar{W}_p)] \div \sum [P_i (W_i - \bar{W}_p)^2]$$

where P_i was the number of pupils in district i , X_i was the revenue per pupil in district i , $\bar{X}_p$ was the mean per-pupil revenues for all districts, W_i was the assessed valuation per-pupil in district i , and $\bar{W}_p$ was the mean assessed valuation per-pupil for all districts.

The regression coefficient, unlike the correlation coefficient, measured the magnitude, not the strength, of the relationship that existed between fiscal capacity and per-pupil inputs. Also, the regression coefficient did not show causality or control for varying levels of fiscal effort generated by local school districts.²⁶

In the current study, the regression coefficient was represented as the dollar amount of change in per-pupil revenues resulting in a one dollar change in assessed valuation per-pupil. A regression coefficient was calculated at each level of the aggregate. Any change in the regression coefficient when per-pupil revenues produced through the application of the discretionary local levies were added to the per-pupil revenues distributed through the foundation system was of interest in the current study. An increase in this relationship indicated a decrease in wealth neutrality and therefore a decrease in fiscal equity.

The correlation coefficient and regression coefficient assessed the relationship between per-pupil revenues and district wealth. To assess the effects of wealth neutrality caused by the local discretionary levies, econometric measures, including the Gini coefficient and McLoone index, were also applied. The Gini coefficient and the McLoone index were econometric measures used to assess the effects of the three discretionary levies on the wealth neutrality of the FEFP.²⁷

The Gini coefficient measured how closely the variable distribution provided a specific percentage of the population with that same percentage of revenues. The smaller the value, the more equitable the distribution of revenues was in providing a specified percentage of students with the same percentage of revenues. The formula to calculate the Gini coefficient was

$$\sum_i \sum_j P_i P_j (X_i - X_j) \div 2 (\sum_i P_i)^2 X_p$$

where $\sum$ was the sum for all students in districts i and j , P_i was the number of pupils in district i , P_j was the number of pupils in district j , X_i was the expenditure per-pupil in district i , X_j was the expenditure per-pupil in district j , and X_p was the mean expenditure per-pupil for all districts.²⁸

Values on the Gini coefficient may vary from zero to one. When the coefficient was zero, absolute equity existed. As the coefficient increased, the level of equity decreased. The coefficient compared revenues at each level with revenues at other levels and was sensitive to changes throughout the distribution, though not to outliers.²⁹ The Gini coefficient was calculated for each aggregate level in the current study. Any increase of this coefficient from the foundation level to other aggregate levels provided evidence of the degree of inequity as a result of the discretionary local levies.

The McLoone index was the ratio of the sum of revenues per-pupil per district below the median to the sum of revenues required if all districts below the median were at the median level of revenues. The formula to calculate the McLoone Index was

$$\sum (i \dots j) P_i X_i \div M_p \sum (i \dots j) P_i$$

where $\sum$ was the sum of pupils in all districts i to j , P_i was the number of pupils in district i , X_i was the expenditure per-pupil in district i , and M_p was the median expenditure per-pupil for all districts.³⁰

In public school finance studies, this index measured the amount of revenue required to raise the lower half of the state median. The closer the index value was to one, the greater the equity. The McLoone index was not concerned with the distribution of all data. The index only measured equity provided pupils below the state median per-pupil revenues and disregarded pupils served above the median.³¹

McLoone indices were calculated for per-pupil revenues at each aggregate level in the current study. Any changes in the McLoone were of interest when the per-pupil revenue was affected by the addition of the local discretionary levies. These changes were indicative of the effect of these levies on fiscal equity for districts below the per-pupil revenue median.

The extent to which these local discretionary levies impacted the wealth neutrality and resource accessibility of the foundation system were assessed by the previous measures. Tax yield was another equity assessment researched in the current study.

Tax Yield

The concept of tax yield in this study concerned the correlation between the degree of local fiscal educational effort and ensuing resources. Equal tax effort should result in equal tax yield. To this end, the relationship between local tax effort and the per-pupil revenues generated through the tax was assessed to determine tax yield equity. This relationship was measured through the correlation coefficient regression technique.

The correlation coefficient measured the strength of the relationship between the tax rate and the per-pupil revenues generated once this millage was applied. The formula for the correlation coefficient calculation was

$$\sum [P_i (X_i - X_p) (T_i - T_p)] \div \sum \{P_i [\sqrt{(X_i - X_p)^2}] [\sqrt{(T_i - T_p)^2}]\}$$

where P_i was the number of pupils in district i , X_i was the per-pupil revenues in district i , X_p was the mean per-pupil revenues for all districts, T_i was the per-pupil millage rate for district i , and T_p was the mean per-pupil tax rate for all districts.³²

Tax yield and tax effort should be positively related. The correlation coefficient was calculated at each aggregate level in the current study. Any decrease in the correlation coefficient as a result of the local discretionary levies was of interest. Absolute equity was indicated with a value of one. A value of zero indicated no relationship between yield and effort. A high value meant tax yield was highly correlated to effort. Negative values meant that per-pupil revenues decreased with increased tax effort. Such a correlation was indicative of inequity.³³

Another measure of tax yield was the regression coefficient. This coefficient provided an indication of the strength of the relationship between tax effort and per-pupil revenues. The formula used to calculate the regression coefficient was

$$\sum [P_i (X_i - X_p) (T_i - T_p)] \div \sum [P_i (T_i - T_p)]^2$$

where P_i was the number of pupils in district i , X_i was per-pupil revenues in district i , X_p was the statewide mean per-pupil revenues, T_i was the per-pupil tax rate for district i , and T_p was the statewide mean per-pupil tax rate. The values of these measurements were conveyed as the dollar difference in per-pupil revenues given a one mill change in tax rate.³⁴

Of interest in this study was the change in the regression coefficient after the discretionary local levies were added to the per-pupil revenues distributed through the foundation system. Any decrease in this value meant a decrease in the degree of change in revenues per-pupil correlated with a one-mill increase in tax effort above the required local effort. A decrease in this relationship also had a diminishing effect on tax yield equivalence and fiscal equity.³⁵

Summary

Table 3-2 summarizes the equity analysis measurements applied to determine the degree of disequalization of the local levies on Florida's educational finance program. In this chapter, the method used in the study was described. The chapter began with a discussion of the selection of the study population, Florida, followed by a discussion of local discretionary tax levies in Florida. The research design was then presented, including descriptions of equity measures. The chapter concluded with a discussion of

these methods of assessing the disequalizing effects of the local discretionary levies.

Chapter 4 includes the analyses and discussion of the research results.

Table 3-2. Summary of Equity Analysis Measurements

Construct Measured	Measurement Utilized	Type of Measurement	Formula
Resource Accessibility	Mean	Univariate	$\sum X_i \div N$
	Range	Univariate	Highest X_i - Lowest X_i
	Restricted Range	Univariate	X_i at 95 th percentile - X_i at 5 th percentile
	Federal Range Ratio	Univariate	X_i at 95 th percentile - X_i at 5 th percentile + X_i at the 5 th percentile
	Variance	Univariate	$\sum [P_i (X_p - X_i)^2] \div \sum P_i$
	Standard Deviation	Univariate	$\sqrt{\sum [P_i (X_p - X_i)^2] \div \sum P_i}$
	Coefficient of Variation	Univariate	$\sqrt{\sum [P_i (X_p - X_i)^2 \div \sum P_i] \div X_p}$
Wealth Neutrality	Correlation Coefficient	Multivariate/Regression	$P_i (X_i - X) (W_i - W) \div [\sqrt{\sum P_i (X_i - X)^2} [\sqrt{\sum P_i (W_i - W)^2}]]$
	Coefficient of Determination	Multivariate/Regression	$[P_i (X_i - X) (W_i - W) \div [\sqrt{\sum P_i (X_i - X)^2} [\sqrt{\sum P_i (W_i - W)^2}]]]^2$
	Regression Coefficient	Multivariate/Regression	$\sum [P_i (X_i - X_p) (T_i - T_p)] \div \sum [P_i (T_i - T_p)^2]$
	Gini Coefficient	Univariate/Econometric	$\sum_i \sum_j P_i P_j (X_i - X_j) \div 2 (\sum_i P_i)^2 X_p$
	McLoone Index	Univariate/Econometric	$\sum (i \dots j) P_i X_i \div M_p \sum (i \dots j) P_i$
Tax Yield	Correlation Coefficient	Multivariate/Regression	$\sum [P_i (X_i - X_p) (T_i - T_p)] \div \sum \{i, [\sqrt{(X_i - X_p)^2}] [\sqrt{(T_i - T_p)^2}]\}$
	Regression Coefficient	Multivariate/Regression	$\sum [P_i (X_i - X_p) (W_i - W_p)] \div \sum [P_i (W_i - W_p)^2]$

Sources: Berne and Stiefel, 20; Thompson, Wood, and Honeyman, 246-252.

Notes

1. Fla. Stat. sec. 200.001(3), 236.25

2. Florida Department of Education, Florida Education Finance Program, 1996-97, Statistical Report, Tallahassee, FL, 24.

3. David C. Thompson, R. Craig Wood, and David S. Honeyman, Fiscal Leadership for Schools: Concepts and Practices (White Plains, NY: Longman, 1994), 224.

4. Julie K. Underwood, "School Finance Litigation: Legal Theories, Judicial Activism, and Social Neglect," Journal of Education Finance 20 (Fall 1994): 161; Deborah A. Verstegen and Terry Whitney, "From Courthouse to Schoolhouses: Emerging Judicial Theories of Adequacy and Equity," Educational Policy 11(3) (September 1997): 349-350; Deborah A. Verstegen, "The New Wave of School Finance Litigation," Phi Delta Kappan (November 1994), 243, 249-250.

5. Kern Alexander and Lee Shiver, "Equalization Among Florida School Districts," Journal of Education Finance 9 (Spring 1983): 53-62; J. Michael O'Loughlin, R. Craig Wood, and David S. Honeyman, A Study of the Effects of the Sparsity Supplement on the Equity of the Florida Education Finance Program (Gainesville, FL: UCEA Center for Education Finance, 1992); Gaylon D. Currie, An Examination of the Equity of Capital Outlay Funding in the State of Florida and the Equity of General Expenditures for Education (Doctoral Dissertation, University of Florida, 1992); Steven D. Stark, David S. Honeyman, and R. Craig Wood, "The Florida Lottery: Its Use as a Substitute for Existing Funds and its Effects on the Equity of School Funding," Journal of Education Finance 18 (Winter 1993), 231-242; Susan R. Summers, An Examination of Supplantation and Redistribution Effects of Lottery Allocations to a Community College System (Doctoral Dissertation, University of Florida, Gainesville, FL, 1993), 156-166; Jeffrey Maiden and R. Craig Wood, "An Examination of the Discretionary Elements of the Florida Education Finance Program," Journal of Education Finance 21 (Fall 1995), 271-290; Mary L. M. Chambers, The Effects of Additional Revenues from Capital Outlay Transfers on the Equity of a State School Finance System (Doctoral Dissertation, University of Florida, 1996); Yasser Nakib and D. Herrington, "The Political Economy of K-12 Education Finance: The Context of a Fast Growing, Large State," Journal of Education Finance 23 (Winter 1998), 351-373.

6. Fla. Stat. sec. 200.001(3), 236.25.

7. Robert Berne and Leanna Stiefel, The Measurement of Equity in School Finance (Baltimore: The Johns Hopkins University Press, 1984), 13, 42.

7. Berne and Stiefel, The Measurement of Equity, 17; Thompson, Wood and Honeyman, 246-247.

8. R. Craig Wood and David C. Thompson, Education Finance Law: Constitutional Challenges to State Aid Plans: An Analysis of Strategies (Topeka, KS: National Organization of Legal Problems in Education, 1993), 47; Thompson, Wood and Honeyman, 252

9. Berne and Stiefel, The Measurement of Equity, 18; Thompson, Wood and Honeyman, 178-179.

10. Berne and Stiefel, The Measurement of Equity, 19; Thompson, Wood and Honeyman, 247-249; Wood and Thompson, 47-48.

11. Berne and Stiefel, The Measurement of Equity, 48-49; Thompson, Wood, and Honeyman, 247; Wood and Thompson, 48.

12. Kern Alexander and Richard G. Salmon, Public School Finance (Needham Heights, MA: Allyn and Bacon, 1995), 235; Thompson, Wood, and Honeyman, 247; Berne and Stiefel, The Measurement of Equity 19, 65; Wood and Thompson, 48.

13. Berne and Stiefel, The Measurement of Equity, 19, 65; Thompson, Wood, and Honeyman, 248; Alexander and Salmon, Public School Finance, 235-236.

14. Berne and Stiefel, The Measurement of Equity, 19, 66; Thompson, Wood, and Honeyman, 248; Alexander and Salmon, Public School Finance, 236; Wood and Thompson, 49.

15. Thompson, Wood, and Honeyman, 248; Alexander and Salmon, Public School Finance, 236.

16. Berne and Stiefel, 19; Thompson, Wood, and Honeyman, 249; Wood and Thompson, 49.

17. Robert Berne, "Alternative Equity and Equality Measures," Selected School Finance Papers (Washington, DC: U.S. Department of Health, Education, and Welfare, 1978), 19; Thompson, Wood, and Honeyman, 249.

18. Berne and Stiefel, 19; Thompson, Wood, and Honeyman, 249; Wood and Thompson, 49-50.

19. David S. Moore, Statistics, 3rd ed. (New York: W.H. Freeman, 1991), 220-23.

20. Berne and Stiefel, The Measurement of Equity, 69; Thompson, Wood, and Honeyman, 249; Alexander and Salmon, Public School Finance, 236; Wood and Thompson, 50.

21. Alexander and Salmon, Public School Finance, 239; Thompson, Wood, and Honeyman, 252.

22. Thompson, Wood, and Honeyman, 252.
23. Berne and Stiefel, The Measurement of Equity, 72-75; Thompson, Wood, and Honeyman, 251-252.
24. Forbis Jordan and Mary P. McKeown, "Equity in Financing Public Elementary and Secondary Schools," in School Finance Policies and Practices, ed. James W. Guthrie (Cambridge, MA: Ballinger, 1980), 308-309; Berne and Stiefel, The Measurement of Equity, 27-28; Thompson, Wood, and Honeyman, 251-252.
25. Alan Agresti and Barbara Finlay Agresti, Statistical Methods for the Social Sciences (San Francisco: Dellen, 1986), 265-268.
26. Ibid., 336-338.
27. Agresti and Agresti, Statistical Methods, 15-18; Guthrie, School Finance, 309-310.
28. Berne and Stiefel, The Measurement of Equity, 29.
29. Berne and Stiefel, The Measurement of Equity, 19, 66-67; Thompson, Wood, and Honeyman, 251; Alexander and Salmon, Public School Finance, 236.
30. Alexander and Salmon, Public School Finance, 236.
31. Berne and Stiefel, The Measurement of Equity, 19, 66; Thompson, Wood, and Honeyman, 250; Alexander and Salmon, Public School Finance, 237.
32. Alexander and Salmon, Public School Finance, 237.
33. Berne and Stiefel, The Measurement of Equity, 72-75; Thompson, Wood, and Honeyman, 251-252;
34. Thompson, Wood, and Honeyman, 252; Alexander and Salmon, Public School Finance, 238.
35. Thompson, Wood, and Honeyman, 251-252.
36. Berne and Stiefel, The Measurement of Equity, 72-73; Alexander and Salmon, Public School Finance, 238-39.

CHAPTER 4 DATA ANALYSIS

Introduction

This chapter included an analysis of the data evaluated in this study. This analysis was performed to answer the question, "How does the additional revenue generated by discretionary and unequalized local levies affect equity in a foundation education funding distribution system?" Three standard measures of fiscal equity including resource accessibility, wealth neutrality, and tax yield were applied and per-pupil revenues were examined across the eight levels of aggregation to determine the degree of fiscal inequity in the FEFP.

Resource accessibility was measured using univariate measures including the range, restricted range, federal range ratio, variance, standard deviation, and coefficient of variation. These measures of resource accessibility assessed whether all students had equal access to resources.

Wealth neutrality was measured using regression and econometric measures including the correlation coefficient, coefficient of determination, regression coefficient, Gini coefficient, and McLoone index. These measures of wealth neutrality determined if the distribution of funds was equitable. Assessed property valuation per pupil was correlated with per-pupil revenues for the correlation coefficient. Per-pupil assessed valuation represented the independent variable. Per-pupil revenue before and after a single discretionary levy or a combination of these levies was applied represented the dependent variable for the regression coefficient.

Tax yield was measured using the correlation coefficient and the regression coefficient. Per-pupil tax rate was correlated with per-pupil revenues to assess tax yield. These measures of tax yield indicated the degree to which equal tax effort resulted in equal yield. With these regression measures, greater equity was indicated by a positive correlation.

Results of Equity Measures

Resource Accessibility: Range Measures

Resource accessibility was an equity construct that measured the degree to which all students had access to an approximately equivalent level of fiscal support for education. Horizontal equity was measured by statistics that indicated the dispersion of values in a distribution. Measures of the range, restricted range, and the federal range ratio were included in the current study. The results of the resource accessibility measures across the eight levels of aggregation are presented in Table 4-1.

Range

The range measured the difference between the highest and lowest values in a distribution. The result was a dollar amount. The smaller the range, the greater the equity.

The range for the base per-pupil revenue was \$871.94. The range for revenues from the capital outlay/maintenance millage rates was \$1788.74. The base combined with revenues from the discretionary current operating yielded a range of \$1261.50. The range for the base and the supplemental discretionary revenues was \$919.85. The combination of the base plus the capital outlay/maintenance and the discretionary current

Table 4-1. Resource Accessibility: Measures of Distribution Range

Level	Per-pupil Equity Examined	\$ Dollars Per-pupil Range	\$ Dollars Per-pupil Restricted Range	Federal Range Ratio
1	Base FEFP	\$871.94	\$598.89	0.190
2	Base + Capital Outlay/Maintenance	\$1788.74	\$1223.33	0.390
3	Base + Discretionary Current Operating	\$1261.50	\$734.71	0.020
4	Base + Supplemental Discretionary	\$919.85	\$622.93	0.190
5	Base + Capital Outlay/Maintenance + Discretionary Current Operating	\$2,073.81	\$1,574.07	0.472
6	Base + Discretionary Current Operating + Supplemental Discretionary	\$1,314.96	\$763.83	0.235
7	Base + Capital Outlay/Maintenance + Supplemental Discretionary	\$1,840.81	\$1,276.16	0.383
8	Base + Capital Outlay/Maintenance + Discretionary Current Operating + Supplemental Discretionary	\$2,126.45	\$1,627.52	0.488

operating revenues yielded a range of \$2,073.81. The combination of the base plus the discretionary current operating and the supplemental discretionary revenues resulted in a per-pupil range of \$1,314.96. The combination of the base with the capital outlay/maintenance and the supplemental discretionary revenues yielded a per-pupil range of \$1,840.81. The base revenues coupled with the revenues generated from a combination of the three discretionary tax sources resulted in a range of \$2,126.45.

Restricted Range

The restricted range measured the difference between the 5th and 95th percentiles in a distribution. The restricted range was divided by the per pupil revenue at the 5th

percentile. The smaller the range, the greater the resource accessibility and equity. The advantage of the restricted range was that the distribution extremes were not included, therefore the result was less influenced by outliers.

The restricted range for the base per-pupil revenue was \$598.89. The restricted range was \$1223.33 for revenues from the capital outlay/maintenance millage rates. The base combined with the discretionary current operating yielded a restricted range of \$734.71. The restricted range was \$622.93 for the base and the supplemental discretionary revenues. The combination of the base plus the capital outlay/maintenance and the discretionary current operating yielded a restricted range of \$1,574.07. The combination of the base plus the discretionary current operating and the supplemental discretionary resulted in a restricted range of \$763.83. The combination of the base with the capital outlay/maintenance and the supplemental discretionary yielded a per-pupil restricted range of \$1,276.16. The base revenues coupled with the revenues generated from a combination of the three discretionary tax sources resulted in a restricted range of \$1,627.52.

Federal Range Ratio

The federal range ratio was a product of the restricted range divided by the value of the distribution at the 5th percentile. The values ranged from zero to one, with zero equal to perfect equity. Increasing ratios indicated decreasing equity and resource accessibility in the distribution of funds.

The federal range ratio was .190 for the base revenue , .390 for the base plus capital outlay/maintenance revenues, .020 for the base plus discretionary current operating revenues, and .190 for the base plus supplemental discretionary revenues.

The federal range ratio for the base in combination with the revenues from the capital outlay/ maintenance and discretionary current operating was .472. The combination of the base with the discretionary current operating and supplemental discretionary revenues was .235. The combination of the base with capital outlay/maintenance and supplemental discretionary revenues was .383. The federal range ratio was .488 for the revenues from the base program combined with those produced through application of all discretionary levies including the capital outlay/maintenance, discretionary current operating, and supplemental discretionary revenues.

The results of the resource accessibility range measures across the eight levels of aggregation were presented in this section. The effect on the ranges of the distribution as the discretionary levies were added are discussed in the following section.

Effect on the Ranges of the Distribution

The effect on the ranges of the distribution as the capital outlay/maintenance, discretionary current operating, and supplemental discretionary funds were added to the base individually was evident, as indicated in aggregate levels 2, 3, and 4. The distribution range increased as the discretionary revenues were combined with revenues raised through the base program. When the capital outlay/maintenance revenue was added to the base, the range, restricted range, and federal range ratio more than doubled. When the discretionary current operating revenue was added to the base, the range increased by 45% ($\$1,261.50 - \$871.94 = \$389.56 \div \$871.94$) and the restricted range increased by 22% ($\$734.71 - \$598.89 = \$135.82 \div \$598.89$). The range, restricted range, and federal range ratio increased marginally, while the federal range ratio showed no increase when the supplemental discretionary revenue was added to the base.

The federal range ratio increased as the discretionary revenues were combined with revenues raised through the base program. The federal range ratio for the base revenues was .19 and increased to .488 when revenues from the three discretionary levies were added to the base dollars.

The impact on the ranges of the distribution as the various combinations of the discretionary levies were added with the base was also apparent, as indicated in aggregate levels 5, 6, and 7. A combination of the revenues generated from the base with those of the capital outlay/maintenance and discretionary current operating yielded a range, restricted range, and federal range ratio greater than results when the same measures of resource accessibility were applied to the base and a single discretionary levy. Since the ranges were the highest for the revenues generated by the capital outlay/maintenance with the base, it followed that these measurements would also be the high for any subsequent combination that included the revenues generated by the capital outlay/maintenance levy. Conversely, since the ranges were the lowest for the revenues generated when the supplemental discretionary was added to the base, it was predictable that these same measurements for any combination of discretionary levies that included the supplemental discretionary would be low in comparison with the other combinations in aggregate levels 5, 6, and 7. Finally, the range, restricted range, and federal range ratio were the highest in aggregate level 8 when all three discretionary levies were added to the base.

The preceding discussion included the results of the calculations relevant to the effects of additional revenues from discretionary levies on the resource accessibility of the foundation program. More evidence of the effects of discretionary revenues on the distribution of a foundation system were apparent when variability measures were

applied. The variability measures included the mean, variance, standard deviation, and coefficient of variation. These results follow.

Resource Accessibility: Variability Measures

The results for these resource accessibility constructs are presented in Table 4-2 and discussed subsequently.

Table 4-2. Resource Accessibility: Measures of Variability

Level	Per-pupil Equity Examined	Dollars per Pupil Mean	Dollars per Pupil Variance	Standard Deviation	Coefficient of Variation
1	Base FEFP	\$3,490.51	\$34,063.15	\$184.56	0.053
2	Base + Capital Outlay/Maintenance	\$3,853.97	\$156,869.09	\$396.07	0.103
3	Base + Discretionary Current Operating	\$3,595.96	\$56,801.71	\$238.33	0.066
4	Base + Supplemental Discretionary	\$3,529.62	\$37,381.36	\$193.34	0.055
5	Base + Capital Outlay/Maintenance + Discretionary Current Operating	\$3,959.43	\$210,279.22	\$458.56	0.116
6	Base + Discretionary Current Operating + Supplemental Discretionary	\$3,635.07	\$61,713.25	\$248.42	0.068
7	Base + Capital Outlay/Maintenance + Supplemental Discretionary	\$3,893.08	\$165,803.37	\$407.19	0.105
8	Base + Capital Outlay/Maintenance + Discretionary Current Operating + Supplemental Discretionary	\$3,998.54	\$220,806.83	\$469.90	0.118

Mean

The mean measured the central tendency of the distribution at each of the eight aggregate levels. The statewide mean per pupil revenues compared with the district mean per-pupil revenues were often predictive of differences in resource accessibility among the districts.

The mean per-pupil revenue generated through the foundation component of the FEFP was \$3,490.51. The mean per-pupil revenues combined with the capital outlay/maintenance, discretionary current operating, and supplemental discretionary millage were \$3,853.97, \$3,595.96, and \$3,529.62, respectively. The mean for the combination of the base with the capital outlay/maintenance and the discretionary current operating levies was \$3,959.43. The mean for the combination of the base with the discretionary current operating and supplemental discretionary levies was \$3,635.07. The mean revenue for the combination of the base with the capital outlay/maintenance and supplemental discretionary levies was \$3,893.08. The mean revenue for the base with all three discretionary levies was \$3,998.54.

Variance

The variance was the average of the squared deviations from the mean. The smaller the variance, the smaller the variation in the distribution and the greater the equity. As the variance increased, equity decreased. The variance considered all observations, which was an advantage over resource accessibility measures previously discussed in this study. Because the variance allowed for significant differences between groups, it was particularly useful for inferential analysis.

The variability of the distribution of the revenues increased, as measured by the variance and standard deviation calculations, when discretionary levies were applied.

The variance of the revenues generated through the base foundation program was \$34,063.15. The variance for the base plus the capital outlay/maintenance revenues was \$156,869.09, as indicated in aggregate level 2. For the base plus the discretionary current operating revenues, the variance was \$56,801.71, as indicated in aggregate level 3. The variance for the base and the supplemental discretionary revenues was \$37,381.36, as indicated in aggregate level 4. The dollars per-pupil variance from the combination of the base with the capital outlay/maintenance and discretionary current operating levies was \$210,279.22. The variance from the combination of the base with the discretionary current operating and supplemental discretionary levies was \$61,713.25. The variance from the combination of the base with the capital outlay/maintenance and supplemental discretionary levies was \$165,803.37. The variance from the combination of the base with all three discretionary levies was \$220,806.83, as indicated in aggregate level 8. The variance was greatest for any single discretionary levy applied when the capital outlay/maintenance revenues were added to the base as indicated in aggregate level 2. Finally, the variance was the highest in aggregate level 8 when all three discretionary levies were added to the base.

Standard Deviation

The standard deviation was the square root of the variance. It was based on assumptions about normal distributions on a bell curve. The smaller the standard deviation, the greater was the resource accessibility equivalence and the greater the equity. Increases in the standard deviation, when revenues from discretionary levies were combined with foundation revenues, signaled less equivalent resource accessibility.

The variability of the distribution of the revenues increased when discretionary levies were applied, as measured by the standard deviation. The standard deviation was \$184.56. for the revenues generated through the base foundation program. The standard deviation for the base plus the capital outlay/maintenance revenues was \$396.07, as indicated in aggregate level 2. For the base plus the discretionary current operating revenues, the standard deviation was \$238.33, as indicated in aggregate level 3. The standard deviation for the base and the supplemental discretionary revenues was \$193.34, as indicated in aggregate level 4. The standard deviation from the combination of the base with the capital outlay/maintenance and discretionary current operating levies was \$458.56, from the combination of the base with the discretionary current operating and supplemental discretionary levies was \$248.42, and from the combination of the base with the capital outlay/maintenance and supplemental discretionary levies was \$407.19. The standard deviation from the combination of the base with all three discretionary levies at \$469.90 was greatest when all three discretionary levies were added to the base, as indicated in aggregate level 8.

Coefficient of Variation

The coefficient of variation was the standard deviation divided by the mean of the distribution. The result was a value between zero and one. The closer the number was to 0, the greater the resource accessibility and equity.

The increase in the variability of the distribution was evident when unequalized revenues were included. These calculations of variability were based on separate distributions with variable amounts of aggregate funds. To provide standardized measures, the coefficients of variation were analyzed. The per-student revenue was

obtained by taking the sum of all of the 67 districts per-student revenue and dividing by 67. The result was a number between zero and one. The closer the number was to zero, or perfect equity, the greater the equity of the program. The coefficients of variations were .053 for the base revenue, .103 for the base and the capital outlay/maintenance revenues, .066 for the base and discretionary current operating revenues, and .055 for the base and the supplemental discretionary revenues. The coefficients of variation for the combination of the base with the capital outlay/maintenance and discretionary current operating revenues was .116, for the combination of the base with the discretionary current operating and supplemental discretionary revenues was .068, and for the base with the capital outlay/maintenance and supplemental discretionary revenues was .105. The coefficient of variation for the combination of the base with the capital outlay/maintenance, discretionary current operating, and supplemental discretionary levies was .118. The results of the resource accessibility variability measures were presented in this section. The effect of the discretionary levies on resource accessibility as indicated by variability measures follows.

Effects on Variability of Distribution

Since the variance was the highest for the revenues generated by the capital outlay/maintenance with the base, it followed that variability measurements for any subsequent combination that included the revenues generated by the capital outlay/maintenance would also be high. Conversely, since the variance and standard deviation were the lowest for the revenues generated for the supplemental discretionary and the base revenue, it was predictable that variability measurements for any combination of discretionary levies that included the supplemental discretionary would

be low in comparison with the other combinations in aggregate levels 5, 6, and 7. Finally, the variance and standard deviation were the highest in aggregate level 8 when all three discretionary levies were added to the base.

Overall, the variability of the foundation dollars increased with the inclusion of discretionary dollars. The coefficient of variation tended toward disequalization, increasing from .053 with the base to .118, when the revenues from all three discretionary levies were combined with the base and measured. Resource accessibility and equity decreased as discretionary levies were added as measured by the variance and standard deviation.

The previous measures established the degree of revenue variability among Florida's school districts across eight levels of aggregation. The following section is a presentation of the results of the calculations of wealth neutrality measures.

Wealth Neutrality: Regression Measures

Wealth neutrality was a construct that measured the degree to which resources for students were a function of the local fiscal wealth. Wealth neutrality was measured by the correlation coefficient, coefficient of determination, and regression coefficient. Two econometric measures, the Gini coefficient and the McCloone index, were also used to measure wealth neutrality.

The results of the wealth neutrality regression measures are detailed in Table 4-3. The correlation coefficients and coefficients of determination provided measures of the strength of the relationship between per-pupil revenues generated across the eight levels of aggregation. The regression coefficients indicated the magnitude of the relationship between the variables across these levels.

Table 4-3. Wealth Neutrality: Regression Measures

Level	Per-pupil Equity Examined	Correlation Coefficient	Coefficient of Determination	Regression Coefficient
1	Base FEFP	0.67	0.44	0.0009
2	Base + Capital Outlay/Maintenance	0.86	0.73	0.0024
3	Base + Discretionary Current Operating	0.82	0.67	0.0014
4	Base + Supplemental Discretionary	0.69	0.48	0.0010
5	Base + Capital Outlay/Maintenance + Discretionary Current Operating	0.90	0.81	0.0029
6	Base + Discretionary Current Operating + Supplemental Discretionary	0.90	0.81	0.0030
7	Base + Capital Outlay/Maintenance + Supplemental Discretionary	0.86	0.74	0.0025
8	Base + Capital Outlay/Maintenance + Discretionary + Supplemental Discretionary	0.90	0.81	0.0030

Correlation Coefficient

The correlation coefficient measured the relationship between wealth and revenue in the district. This calculation resulted in values that ranged from -1.0 to +1.0. The closer the value was to zero, the greater the equity. A zero indicated perfect wealth neutrality and equity. As the number increased, inequity increased.

The correlation coefficient calculated from correlating per-pupil locally assessed property valuations and per-pupil revenues from the foundation program was .67. This result indicated a positive correlation between local wealth represented by per-pupil

property valuation and resources for educational support, represented by per-pupil foundation revenues. The correlation coefficient was .86 for the base plus the capital outlay/maintenance revenues, .82 for base plus the discretionary current operating revenues, and .69 for the base plus the supplemental discretionary revenues. Such high correlation coefficients were anticipated because the revenues were the result of the application of millage rates on the assessed valuation of property.

When revenues from the base were added to various combinations of any two of the discretionary levies, the result was an appreciable increase in the relationship between district property wealth and per-pupil revenues. The correlation coefficient for the combination of the base with revenues from the discretionary current operating and capital outlay/maintenance funding sources was .90, while the correlation coefficient for the combination of the base with revenues from the supplemental discretionary and capital outlay/maintenance funding sources was .86. The correlation coefficient for a combination of the base with revenues from all three discretionary levies was .90.

Coefficient of Determination

The coefficient of determination also measured the relationship between wealth and revenue in the district by measuring the ratio of the variability of per-pupil revenues that were accounted for by variability of per-pupil assessed valuation. It was calculated by squaring the correlation coefficient. Values ranged between zero and one, with zero being perfect wealth neutrality and equity. Increasing numbers indicated an increase in variance as a result of local wealth, therefore, a decrease in wealth neutrality and equity.

Per-pupil assessed valuation variability measured .44 of the variability in per-pupil base revenues, .73 of the variability in per-pupil revenues from the base with the

capital outlay/maintenance, .67 of the variability in per-pupil revenues from the base with the discretionary current operating millage, and .48 of the variability in per-pupil revenues from the base and the supplemental discretionary levies.

When the per-pupil base revenues were aggregated with revenues from various combinations of the discretionary levies, the variability was almost double the variability of the base. The coefficient of determination for the base combined with the capital outlay/maintenance and discretionary current operating was .81, for the base combined with the discretionary current operating and supplemental discretionary was .81, and for the base with the capital outlay/maintenance and supplemental discretionary was .74. Per-pupil variability measured .81 of the variability in revenues raised through the combination of the base combined with the capital outlay/maintenance, discretionary, and supplemental discretionary levies.

Regression Coefficient

The regression coefficient measured the difference a change in wealth, or tax rate, had on expenditures. This measurement of the magnitude of the relationship between fiscal capacity and per pupil inputs resulted in a dollar amount of change in the per pupil revenues. An increase in this relationship indicated a decrease in wealth neutrality, therefore a decrease in fiscal equity.

The regression coefficient for the base revenue was .0009. This meant that for every dollar increase in the assessed valuation per pupil, there was a commensurate increase of \$.0009 in per-pupil revenues. The regression coefficient for the base with the capital outlay/maintenance revenues was .0024, for the base with the discretionary

current operating revenues was .0014, for the base with the supplemental discretionary revenues was .0010.

The regression coefficient for per pupil revenues from the base program with the various combinations of the discretionary levies was .0029 when the base was combined with the capital outlay/maintenance and discretionary current operating revenues, .0030 when the base was combined with the discretionary current operating and the supplemental discretionary revenues, and .0025 when the base was combined with the capital outlay/maintenance and supplemental discretionary revenues. When the base was combined with the revenues from all three discretionary levies, the regression coefficient was .0030. Measures of variability were the highest when the revenues from the capital outlay/maintenance discretionary levy were included in any of the calculations.

The effect of the discretionary levies on the wealth neutrality as assessed by variability measures was mixed. Equity decreased as measured by the correlation coefficient and coefficient of determination. The effect on wealth neutrality and equity tended toward disequalization. When the regression coefficient was applied, this trend toward disequalization continued, but the results were less disequalizing compared with the results of the correlation coefficient and coefficient of determination.

The preceding section included the results of wealth neutrality regression measures including the correlation coefficient, coefficient of determination, and regression coefficient. The next section includes the results of two econometric measures of wealth neutrality, the McCloone index and the Gini coefficient, when each measure was applied across the eight levels of aggregation.

Wealth Neutrality: Econometric Measures

Table 4-4 details the results of the application of these two econometric measures of wealth neutrality, the McLoone index and the Gini coefficient.

Table 4-4. Wealth Neutrality: Econometric Measures

Level	Per-pupil Equity Examined	McLoone Index	Gini Coefficient
1	Base FEFP	0.9752	0.0237
2	Base + Capital Outlay/Maintenance	0.9536	0.0406
3	Base + Discretionary Current Operating	0.9722	0.0275
4	Base + Supplemental Discretionary	0.9770	0.0240
5	Base + Capital Outlay/Maintenance + Discretionary Current Operating	0.9586	0.0447
6	Base + Discretionary Current Operating + Supplemental Discretionary	0.9735	0.0279
7	Base + Capital Outlay/Maintenance + Supplemental Discretionary	0.9576	0.0409
8	Base + Capital Outlay/Maintenance + Discretionary + Supplemental Discretionary	0.9595	0.0450

McLoone Index

The McLoone index measured the degree of equity in the lower half of the distribution. This calculation was the ratio of the sum of revenues per pupil per district below the median to the sum of revenues required if all districts below the median were at the median aggregate level of revenues. The result was a number between zero and one. The closer the index was to 1, the greater was the equity of the lower half of the distribution.

The McLoone index for base revenues was .9752, for the base with the capital outlay/maintenance dollars was .9536, for the base with the discretionary current operating dollars was .9722, and for the base with the supplemental discretionary dollars was .9770. The moneys generated from the combination of the base with two of the three discretionary levies yielded a McLoone index of .9586 for the base with the current operating and capital outlay/maintenance revenues, .9735 for the base with the current operating and supplemental discretionary revenues, and .9576 for the base with the capital outlay/maintenance and supplemental discretionary revenues. The combination of the base revenue with moneys from all three discretionary levies translated to a McLoone index of .9595. The effect of discretionary levies on the wealth neutrality and equity of the distribution system indicated a slight disequalization when measured by the McLoone index.

Gini Coefficient

The Gini coefficient measured how closely the variable distribution provided a specific percentage of the population with an equal percentage of revenues. This wealth neutrality measure indicated the relationship between the school district's wealth, local support through taxes, and the per-pupil expenditures of the school district. The result was a number between zero and one. The closer the value was to zero, the more equitable the revenue distribution was in providing a given percentage of students with an equal percentage of revenue.

The Gini coefficient calculated for base revenues was .0237, for base revenues and capital outlay/maintenance revenues was .0406, for the base revenues and discretionary current operating revenues was .0275, and for the base revenues and

supplemental discretionary revenues was .0240. The moneys generated from the combination of the base with two of the three discretionary levies yielded a Gini coefficient of .0447 for the base with the current operating and capital outlay/maintenance revenues, .0279 for the base with the current operating and supplemental discretionary, and .0409 for the base with the capital outlay/maintenance and supplemental discretionary revenues. The combination of the base revenue with moneys from all three discretionary levies translated to a Gini coefficient of .0450.

The relatively low values for the Gini coefficient indicated that the funding formulas were close to equitable at each of the eight levels of aggregation. The closer the value was to zero, the more equitable the revenue distribution was in providing a certain percentage of students with an equal percentage of the revenue. Although the Gini coefficient was highest when the capital outlay/maintenance levies were included in the calculation at levels two, five, seven and eight, the values were still relatively low. The effect of discretionary levies on the wealth neutrality and equity of the distribution system was slight when measured by the Gini coefficient.

The preceding section represented measurement of the effects of discretionary levies on the wealth neutrality of a foundation program, using both regression and econometric measures. In the next section, the results of tax yield measures are presented.

Tax Yield

Tax yield was a construct that measured the relationship between the tax rate and per pupil revenues. The correlation coefficient and regression coefficient were used to measure the relationship between tax effort and per pupil revenues across the eight levels

of aggregation. Table 4-5 indicates the results of the regression analysis including correlation coefficient and regression coefficient measures.

Table 4-5. Tax Yield

Level	Per-pupil Equity Examined	Correlation Coefficient	Regression Coefficient
1	Base FEFP	0.5188	+ .0000009854
2	Base + Capital Outlay/Maintenance	0.5177	+ .0000000008
3	Base + Discretionary Current Operating	0.5194	+ .0000000009
4	Base + Supplemental Discretionary	0.5167	+ .0000000010
5	Base + Capital Outlay/Maintenance + Discretionary Current Operating	0.5182	+ .0000000007
6	Base + Discretionary Current Operating + Supplemental Discretionary	0.5174	+ .0000000009
7	Base + Capital Outlay/Maintenance + Supplemental Discretionary	0.5160	+ .0000000007
8	Base + Capital Outlay/Maintenance + Discretionary + Supplemental Discretionary	0.5166	+ .0000000008

Correlation Coefficient

The correlation coefficient measured the strength of the relationship between the tax rate and the per-pupil revenues once the millage was applied. The result was a value between +1, -1, and 0. Absolute equity was indicated by a +1. No relationship between tax yield and effort was indicated with a 0. Inequity was indicated by negative values,

which signaled per pupil revenues decreased with increased tax effort. The result was a value conveyed as a dollar difference in per pupil revenues given a one mill change in tax rate.

A correlation coefficient of .5188 for the base foundation program was indicative of a moderate positive correlation between increasing tax rates and increasing per-pupil revenues. The correlation coefficients for the base with the capital outlay/maintenance, discretionary current operating, and supplemental discretionary levies were .5177, .5194, and .5167, respectively. These correlation coefficients also indicated slight positive relationships between tax effort and revenues per pupil.

Various combinations of two of the tax sources with the base funding source had a consistent effect on tax yield. The correlation coefficients from these combinations indicated a slight positive relationship between tax effort and revenues per pupil. The combination of the base with the capital outlay/maintenance and discretionary current operating levies yielded a correlation coefficient of .5182 with resultant per-pupil revenues. The combination of the base with the discretionary current operating and supplemental discretionary levies resulted in a correlation coefficient of .5174. The combination of the base with the capital outlay/maintenance and supplemental discretionary resulted in a correlation coefficient of .5160. The combination of the per-pupil millage rates from the four funding sources resulted in a correlation coefficient of .5166 with total per-pupil revenues, indicating a moderate positive relationship between the tax rate and the per-pupil revenues once the millage was applied. The effect of discretionary levies on tax yield was slight when measured by the correlation coefficient.

Regression Coefficient

While the strength of the relationship between per-pupil millage rates and per-pupil revenues for each of the eight levels of aggregation was measured with the correlation coefficient, the regression coefficient was used to measure the magnitude of the relationship. The regression coefficient for the base foundation program was measured at $+0.0000009854$. This small value indicated the magnitude with which higher levels of tax effort were associated with lower levels of revenues per pupil. The regression coefficients for the base with the capital outlay/maintenance, the base with the discretionary current operating, and the base with the supplemental discretionary levies were $+0.0000000008$, $+0.0000000009$, and $+0.0000000010$, respectively.

Combinations of two of the tax sources with the base funding source also had a minimal effect on tax yield. The combination of the base with the capital outlay/maintenance and discretionary current operating levies yielded a regression coefficient of $+0.0000000007$. The combination of the base with the discretionary current operating and supplemental discretionary levies resulted in a regression coefficient of $+0.0000000009$. The combination of the base with the capital outlay/maintenance and supplemental discretionary resulted in a regression coefficient of $+0.0000000007$. Finally, when per-pupil yield for the combination of the base foundation with all three discretionary millage rates was regressed on per-pupil revenues from all four sources, the resulting regression coefficient was $+0.0000000008$. The small regression across the eight levels of aggregation was a function of a variable with a large magnitude predicting a variable with a small magnitude. The effect of discretionary levies on tax yield was very slight when measured by the regression coefficient.

Summary of Results

Measures of equity and fiscal neutrality were applied among the 67 Florida school districts as the three discretionary levies were added, both individually and in combination, across the eight aggregate levels. The purpose of this study was to determine the effects of these discretionary levies on the equity of a state school finance system. The variable measured was revenues per weighted FTE as each discretionary levy was applied both individually and in combination. The equity measures used in this study were the mean, range, restricted range, federal range ratio, variance, standard deviation, coefficient of variation, correlation coefficient, coefficient of determination, regression coefficient, McCloone index, and Gini coefficient. Measures of tax yield used in this study were the correlation coefficient and regression coefficient. A summary of the results derived from these measures are presented in Table 4-7.

Conclusion

The results of the analysis meant to address the question, "How does the additional revenue generated by the discretionary and unequalized levies affect the equity in a foundation education funding distribution system?" were presented in this chapter. These results were associated to the fiscal equity constructs including resource accessibility, wealth neutrality, and tax yield. Resource accessibility was measured with the mean, range, restricted range, federal range ratio, variance, standard deviation, and coefficient of variation. Wealth neutrality was measured with both regression and econometric measures. The regression measures described the relationship between per-pupil assessed valuation and per-pupil revenue. These measures included the correlation coefficient, coefficient of determination, and regression coefficient. The econometric

measures, the Gini coefficient and McLoone index, analyzed the distribution of per-pupil revenues. The tax yield was calculated using regression measures that analyzed the relationship between tax effort and per-pupil revenues. These measures included the correlation coefficient and the regression coefficient. A discussion of the results of the study, including overall conclusions and implications, are presented in Chapter 5.

Table 4-7. Summary of Results

Construct Measured	Statistic	Effect of Discretionary Levies
Resource Accessibility: Range Distribution	Range	Decreased Equity
Resource Accessibility: Range Distribution	Restricted Range	Decreased Equity
Resource Accessibility: Range Distribution	Federal Range Ratio	Decreased Equity
Resource Accessibility: Variability	Variance	Decreased Equity
Resource Accessibility: Variability	Standard Deviation	Decreased Equity
Resource Accessibility: Variability	Coefficient of Variation	Slight Disequalization
Wealth Neutrality: Regression	Correlation Coefficient	Decreased Equity
Wealth Neutrality: Regression	Coefficient of Determination	Decreased Equity
Wealth Neutrality: Regression	Regression Coefficient	Slight Disequalization
Wealth Neutrality: Econometric	McCloone Index	Slight Disequalization
Wealth Neutrality: Econometric	Gini Coefficient	Slight Disequalization
Tax Yield	Correlation Coefficient	Slight Disequalization
Tax Yield	Regression Coefficient	Slight Disequalization

CHAPTER 5

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS

Summary

Education is big business. Nationally, about \$244 billion was spent in 1997 on public education. Money does matter. Educators across the United States have concerns about financing their educational systems.¹ School finance has become more complex due to issues surrounding per-pupil expenditures, state and federal funding, allocation of resources, standards-based education, performance-based funding, school-based budgeting, facilities needs, local property taxes, and finally the shift from equity to adequacy. Funding to educate inner city and poor rural populations is particularly problematic.

State constitutions have dictated that education was the responsibility of the state. Fiscal equity has been the goal of school finance litigation for the past several decades. Fiscal neutrality, the belief that the education a child received should not be dependent on the wealth of the district in which the child resided, is a central tenet of fiscal equity. Traditionally, the main criterion used to evaluate fiscal equity has been the per-pupil expenditures for each district.

Recently, the concept of fiscal equity has been broadened to require that every child, regardless of circumstances, received adequate educational opportunities. Both equity and adequacy have been issues in school education funding challenges. The implication was that finance systems must close the gap between the best and the worst

financed school system and provide equal opportunities for excellence in education. Finance systems of the future would be anchored on the belief in a high-quality education for all children, not a basic or minimum education. The goal would be equity and excellence for every child.

Most states, including Florida, have funded education through a foundation distribution program. This system ensured a foundational level of educational support. Theoretically, the foundation program guaranteed each student a minimally acceptable level of fiscal support. Local districts had the option to generate additional revenue through taxes. These discretionary levies allowed some degree of inequity to exist.

State court decisions have been mixed in regard to the degree to which inequity beyond the foundation level was tolerated. States dealt with revenues produced beyond the foundation level differently. Some states equalized revenues generated beyond the foundation levels while others did not. In Florida, the revenues generated by two of the three nonvoted discretionary levies were not equalized by the state. The extent to which these levies had disequalizing effects on the equity of the FEFP for the year 1996-97 was the subject of the current study. The present study used these school finance equity principles to answer the research question, "How does the additional revenue generated by discretionary and unequalized local levies affect equity in a foundation education funding distribution system?"

Findings

In the previous section, a summary of the study was presented. The following section includes findings based on the values calculated from the measures of equity including resource accessibility, wealth neutrality, and tax yield.

Results from the measurement of resource accessibility follow. Resource accessibility measured the degree to which all students had access to an approximately equivalent level of fiscal support for education.

Resource Accessibility

Results from the measures of the range, restricted range, and federal range ratio indicated that the distribution range increased as the discretionary revenues were applied. These ranges increased as the three discretionary levies, capital outlay/maintenance, current operating, and supplemental were introduced into the distribution individually, in combinations of two, and finally when all three discretionary levies were applied. When the capital outlay/maintenance revenues were added into the calculation individually or in combination with other discretionary dollars, the range increase was the greatest. The increase in the range in the distribution of revenues per weighted FTE indicated a disqualifying effect on resource accessibility from the addition of discretionary levies.

Results from the measures of variability including the mean, variance, standard deviation, and coefficient of variation indicated that the variability increased as the discretionary revenues were applied. When unequalized revenues were introduced into foundation program revenues, the effect was an increase in the per-pupil levels of support. This increase was apparent from the increase in the variance and standard deviation figures indicating aggregate dollar variability increases. The standardized calculation of variability, the coefficient of variation, showed a slight increase with the introduction of the three discretionary levies. The increase in standardized variability was most evident when the capital outlay/maintenance revenues were introduced. The increase in the variability in the distribution of revenues per weighted FTE indicated a

disequalizing effect on resource accessibility from the addition of discretionary levies as measured by the variance and standard deviation. The increase in the variability in the distribution of revenues per weighted FTE trended toward disequalization when measured by the coefficient of variation.

The previous explanation indicated the results of measures of resource accessibility. The results of measures of wealth neutrality follow. Wealth neutrality measured the degree to which student resources were not a function of local fiscal wealth.

Wealth Neutrality

Results from the regression and econometric measures of wealth neutrality were mixed. The correlation coefficient indicated a positive correlation between local wealth represented by per-pupil property valuation and resources for educational support when revenues from the discretionary millage were added to the base. When combinations of the discretionary levies were applied, the correlation coefficient increased considerably indicating a strong relationship between district property wealth and per-pupil revenues. The correlation coefficient was the highest when the capital outlay/maintenance discretionary millage was included in the calculation. The positive correlation between wealth and revenue, when the discretionary levies were added to the base, indicated a disequalizing effect on wealth neutrality as measured by the correlation coefficient.

The coefficient of determination also measured the relationship between wealth and revenue in the district. The addition of the discretionary dollars had the effect of increasing the amount of variance in per-pupil revenues evident by variance in per-pupil property wealth. Variance in per-pupil assessed valuation in the base alone represented

less than half of the variation in per-pupil foundation revenues. This variance nearly doubled when all three discretionary levies were applied. The positive relationship between wealth and revenue when the discretionary millage were added to the base indicated a disequalizing effect on wealth neutrality as measured by the coefficient of determination.

The regression coefficient measured the difference a change in wealth or tax rate had on expenditures by measuring the magnitude of the relationship between fiscal capacity and per-pupil inputs. An increase in this relationship was noted as discretionary dollars were added. The increase was greatest when the revenues generated by the capital/outlay maintenance levy was a part of the calculation. Overall, the effect of the discretionary levies on wealth neutrality indicated a slight disequalization as measured by the regression coefficient.

The preceding discussion included the results of wealth neutrality measurements including the correlation coefficient, coefficient of determination, and regression coefficient. The results of the two econometric measures of wealth neutrality, the McCloone index, and the Gini coefficient, follow.

The McCloone index measured equity provided pupils below the state median by calculating the ratio of the sum of revenues per pupil per district below the median to the sum of revenues required if all districts below the median were at the median level of revenues. The distribution of foundation revenues indicated a consistently high degree of wealth neutrality as discretionary revenues were added. The addition of the discretionary levies individually, as well as combinations of the same, had virtually no effect on the distribution below the median. The McCloone index remained almost constant with their addition, ranging from .9536 to .9752 across the eight levels of aggregation. The effect

of the addition of discretionary tax dollars on the distribution below the median indicated a slight disequalization, as measured by the McCloone index.

The Gini coefficient measured the relationship between the school district's wealth, local support through taxes, and the per-pupil expenditures of the district. The addition of discretionary revenues had a slight effect on the Gini coefficient when the revenue from the discretionary current operating and supplemental discretionary levies were applied. The Gini coefficient increased slightly when the capital outlay/maintenance revenues were added. Overall, the distribution of the foundation revenues demonstrated a large degree of wealth neutrality, as measured by the Gini coefficient as well as the McCloone index. However, the application of discretionary levies indicated a trend toward disequalization.

The previous explanation indicated the results of measures of wealth neutrality. The results of measures of tax yield follow. Tax yield measured the relationship between the tax rate and pupil revenues.

Tax Yield

The correlation coefficient measured the strength of the relationship between the tax rate and the per pupil revenues once the millage was applied. The correlation was consistent and positive at +.52 at each of the eight levels of aggregation. These values indicated that increasing tax rates were associated with increasing per-pupil revenues.

The regression coefficient measured the magnitude of the relationship between the tax effort and per-pupil revenues. The result was expressed as a dollar difference in per-pupil revenues given a one mill change in tax rate. The regression was consistent and small at each of the eight levels of aggregation. This small regression was a function of a

variable with a large magnitude predicting a variable with a small magnitude. These values for the correlation coefficient and regression coefficient indicated that the addition of discretionary funding had a slight disequalizing effect on the equality of the tax yield. The trend was toward disequalization as the discretionary levies were applied.

Conclusions

In the preceding section, the findings and the data analyses were presented. This section includes conclusions about the effects of the discretionary levies on the equity of the FEFP.

1. Additional revenues from the discretionary levies increased the average revenues per weighted FTE in Florida's 67 districts when the 1996-97 FEFP was examined, as indicated by the mean.

2. Additional revenues from the discretionary levies had disequalizing effects on the FEFP when applied individually and in combination across the eight aggregate levels as indicated by resource accessibility measures, including the range, restricted range, federal range ratio, variance and the standard deviation. The ranges and variability of the distribution increased as the discretionary revenues were applied. The disequalizing effect was the greatest when the capital outlay/maintenance revenue was added into the calculation. These results were not unexpected given the increase in dollars as additional revenue sources were added to the analysis and because the capital outlay/maintenance levy at 2.0 mills generated more revenue than the other two discretionary levies.

3. Additional revenues from the discretionary levies had slight disequalizing effects on the equity of the FEFP when applied individually and in combination across the eight aggregate levels as indicated by the coefficient of variation, the standardized

calculation of variability. Although the effect on resource accessibility was nominal, the increase in standardized variability was most evident when the capital outlay/maintenance revenues were introduced. The application of discretionary levies indicated a trend toward disequalization.

4. Additional revenues from the discretionary levies had disequalizing effects on the equity of the FEFP when applied individually and in combination across the eight aggregate levels as indicated by the correlation coefficient and coefficient of determination. The correlation coefficient indicated a positive correlation between local wealth represented by per-pupil property valuation and resources for educational support when revenues from the discretionary millage were added to the base. The coefficient of determination demonstrated an increasing amount of variance in per-pupil revenues evident by variance in per-pupil property wealth. Wealth neutrality and equity decreased as the three discretionary levies were added to the base revenue individually and in combinations.

5. Additional revenues from the discretionary levies had slight disequalizing effects on the equity of the FEFP and wealth neutrality when applied individually and in combination across the eight aggregate levels as indicated by the regression coefficient, McCloone index, and Gini coefficient. The regression coefficient showed the slight increase the discretionary tax had on expenditures by measuring the magnitude of the relationship between fiscal capacity and per-pupil inputs. The capital outlay/maintenance levy caused wealth neutrality to decrease more significantly than either of the other discretionary levies. The econometric measures of wealth neutrality, the McCloone index and the Gini coefficient, produced less appreciable effects. The distribution of foundation revenues indicated a consistently high degree of wealth neutrality as

discretionary revenues were added. As measured by the McCloone index, the addition of the discretionary levies individually as well as combinations of the same had only a slight effect on the distribution below the median. The addition of discretionary revenues had little effect on the Gini coefficient, which demonstrated a high degree of wealth neutrality. The increase in the McCloone index and the Gini coefficient was moderate when the capital outlay/maintenance revenues were added. Overall, the distribution of the foundation revenues demonstrated a large degree of wealth neutrality.

6. Additional revenues from the discretionary levies had a slight disequalizing effect on the equity of the FEFP and wealth neutrality when applied individually, and in combination, across the eight aggregate levels as indicated by the correlation coefficient and regression coefficient. Taxpayer equity calculations indicated minimal disequalizing effects when the strength and magnitude of the relationship between the tax rate and the per-pupil revenues were measured after the discretionary millage was applied. The correlation coefficient was consistent and positive at $+0.52$ at each of the eight levels of aggregation. This indicated that increasing tax rates were associated with increasing per-pupil revenues. The regression coefficient was consistently minimal at each of the eight levels of aggregation, which was not surprising since the small regression was a function of a variable with a large magnitude predicting a variable with a small magnitude.

To summarize, a trend toward disequalization emerged as the three discretionary levies were applied individually and in combination. The application of the capital outlay/maintenance levy had the greatest disequalizing effect. If the trend were to continue, further use of discretionary levies would have an even greater disequalizing effect on the equity of the FEFP. It should be noted that violations of horizontal equity

may be the result of some compelling state need to make vertical adjustments to the FEFP. As such, not all disequalizing trends are necessarily detrimental.

Comparisons with Previous FEFP Equity Studies

The results of this study were somewhat consistent with several earlier equity studies conducted on the FEFP. The earliest investigations of the equity in the FEFP including those by Vaughn, Carroll and Park, and Shiver, were not directly relevant to this study because they compared the interdistrict fiscal equity of the FEFP with the previous distribution system implemented under the Minimum Foundation Program (MFP).²

Stark, Honeyman, and Wood examined the interdistrict effects of the Florida Lottery on the state finance system. The results of this equity analysis indicated that the FEFP was basically equitable for the year studied, 1989-1990. This finding was consistent with the results of the present analyses for the year studied, 1996-97. The Stark, Honeyman, and Wood study also concluded that the inclusion of lottery funds impacted the equity of the system. Equity increased in certain districts clustered around the mean level of funding and decreased for districts below the mean. The wealth neutrality of the FEFP was relatively unchanged by the inclusion of lottery funds. This finding was consistent with the conclusions of the present study in which the effects of the discretionary levies on wealth neutrality were also relatively unchanged as measured by the McCloone index and Gini coefficient.³

O'Loughlin, Wood, and Honeyman studied the effects of the sparsity supplement of the FEFP formula on interdistrict per-pupil equity in 1989-90 and found that it reduced the inverse relationship between the distribution of funds to the relative property wealth

of districts. The findings of the present study were consistent with the conclusions of their study that although the basic part of the FEFP remained relatively equitable, the addition of supplements, discretionary dollars, and categorical supplements had disequalizing effects on the distribution system. These researchers concluded that the discretionary levy had a the most disequalizing effect.⁴

Currie studied the relationship of the equity of total capital outlay revenues relative to the equity of general education expenditures and the relationship of the equity of the state and local components of capital outlay and total capital outlay revenues relative to each other for public K-12 education in 1988-89. Currie concluded that, although measures for general educational expenditures indicated greater horizontal equity and greater wealth neutrality than measures for total capital outlay revenues and that there was a lack of wealth neutrality in total capital outlay, the FEFP was equitable. This finding was consistent with the current study.

Maiden analyzed the cumulative disequalizing effects of the two unequalized local discretionary levies on the FEFP, the discretionary millage and school capital improvement millage, both nonvoted millage rates for the year 1992-93. The present study results were consistent with Maiden's findings that discretionary revenues resulted in disequalizing effects on interdistrict resource accessibility and decreased interdistrict wealth neutrality and that the revenues generated through the capital outlay/maintenance source had the most significant disequalizing effect on the distribution. However, the current study differed from Maiden's in one regard. In Maiden's study, the addition of discretionary levies tended to eliminate the positive relationship between per-pupil tax effort and per-pupil revenues. In the current study, the inclusion of discretionary taxes showed negligible effects on taxpayer equity.⁵

Chambers examined the effects of additional revenues from capital outlay transfers on the equity of the FEFP for the year 1994-95. The results of Chamber's study indicated that the effects of the capital outlay transfers were similar to the effects of the application of discretionary millage on the FEFP when assessed by resource accessibility measures of the range distribution and variability. The equity in the distribution of funds among Florida's districts decreased. The results of the current study were not similar to Chambers' study in the assessment of wealth neutrality as measured by the McCloone index and Gini coefficient. Chambers' study found a slight increase in the variation in the distribution of revenues. The variation in the distribution of revenues in the current study was slight.⁶

Sutton investigated the effects of additional revenues for exceptional student programs, in the form of weighted program cost factors, on the equity of the Florida school finance system for the year 1995-96. The results of this study indicated changes in the variation in the distribution of revenues per pupil per district as groups of weighted program cost factors were added to the FEFP. Wealth neutrality measures indicated a lack of a relationship between the property wealth per pupil per district and revenues per pupil per district. The relationship between the property wealth per pupil and revenues per pupil did not change as weighted program cost factors were added to the FEFP. Sutton found that wealth neutrality was not effected by the additional revenues for exceptional student programs. This finding was congruent with findings in the current study that wealth neutrality was affected minimally with the addition of revenues from discretionary levies.⁷

The results of Nakib's study of resource allocation and use in Florida for the year 1991-92 were consistent with the current study in that a high level of interdistrict equity

was demonstrated. Nakib also found no significant variation in district levels of spending when levels of fiscal 1991-92 expenditures were compared between districts based on various frequently used predictors. In addition, the breakdown of district level of expenditures by level of property wealth showed little variation. Findings suggested that per-pupil funding and per-pupil spending for instruction were not considerably significantly higher in the high-performing schools. Although the present study was not intended to explore a correlation between performance and funding, the results of these studies are instructive to future analyses.⁸

Owens and Maiden conducted a comparison of interschool and interdistrict funding equity in Florida for fiscal year 1991-92 to determine whether dollars that flowed through districts and schools were distributed equitably. The extent to which instructional expenditures differed between districts and between schools and subsequent effects related to the racial/ethnic composition or household income levels of students was also explored. The results of their analyses provided evidence of inequality for schools with a high percentage of low socio-economic students. The study showed that substantial inequalities persisted in the FEFP despite the legislative intent to further fiscal equity in Florida.⁹ The findings of the Owens and Maiden study are not directly relevant to the current study. However, the results are informative to future finance studies.

This section included a comparison of previous FEFP equity studies with the current study. The implications for further study are the focus of the next section.

Implications

Conclusions about the effects of the discretionary levies on the equity of the FEFP, including comparisons based on previous equity studies, were presented in the

preceding section. The present section includes a discussion of implications of this study for additional investigation and discussion by public policy makers.

The results of this study merit further research into six associated finance equity issues:

1. An investigation of the effects of an additional voted discretionary levy on the equity of the FEFP would be an enhancement of the present study. The 1997 Florida Legislature gave authority for districts that provided 90% of their total FEFP from required local effort to assess an additional discretionary levy. If such a district's percent increase per K through 12 weighted FTE student was less than the state average percent increase per K through 12 weighted FTE, that district could levy additional millage that would raise an amount not to exceed the difference between the district's percent increase and the state average percent increase.¹⁰ Based on the 1999 tax roll, the 90% limitation reduced the required local effort of three districts, Collier, Monroe, and Martin.¹¹ This additional levy had the potential to be disequalizing and merits further analysis.

2. Further examination of inter-district, inter-school, and inter-student funding equity would clarify the resource allocation patterns at the district, school, and student levels. The current study examined the fiscal equity of a state foundation system and was limited to the analysis of the distribution of funds from the state to the districts. Investigation of the differences in expenditures between districts and between schools warrants further study. The educational initiatives discussed in Chapter 2, including the new standard of high learning outcomes for all students with requisite monetary incentives and sanctions and school-based decision-making among others, create funding variables at the district and school level that warrant scrutiny. Future research could

track expenditures to the individual student level. Such analyses could reveal variations in expenditures by racial/ethnic, student socioeconomic status, gender, school size, wealth of district, and programmatic categories.

3. Analysis of the effects of the two other discretionary millage rates not included in this study, one that may be levied for capital outlay purposes and the other for debt service, may be informative to the discussion of finance equity.¹² The present study was limited to an analysis of the effects of three of the five discretionary levies allowable in the 1996-97 FEFP.

4. Investigating other states implementing a foundation program with discretionary levies to finance public elementary and secondary schools is justified. The present study was limited to an analysis of the effects of local discretionary levies on the foundation finance program in the state of Florida.

5. Alternative revenue sources for education should be studied. The state's current reliance on the sales tax is problematic, particularly during economic recessions. A state income tax probably has the least chance of acceptance. Discontent among taxpayers has fostered a wave of choice and privatization movements, including charter schools and vouchers, that warrant closer scrutiny as finance equity and adequacy issues emerge.

6. Research into the capital outlay/maintenance millage would be instructive. A 1998 federal report indicated a growing school facility problem throughout the 50 states, including Florida. Yet, for the year studied, 1996-97, 45 of the 67 districts in Florida levied the full 2.0 capital outlay/maintenance millage. The revenue from this discretionary levy could offset facilities costs. An analysis of districts' facilities needs in Florida within the context of the capital outlay/maintenance levy merits further study.

Three additional issues not directly associated with local discretionary levies but that impact the FEFP deserve further investigation:

1. Further study into the adequacy of the FEFP is warranted. The present study analyzed the effects of discretionary levies on the equity of a foundation model of state support. The Florida Constitution guaranteed that “adequate provision shall be made for a uniform system of free public schools.”¹³ The uniform provision, the distribution of educational funds equitably throughout the state, was addressed in this study. The adequate provision, which addresses sufficiency of funding to meet individual educational needs, is the next frontier in school finance. Recent state court cases have provided the impetus for the expansion of finance discussions from equity to adequacy as well. Additional study of the “adequate provision” would be instructive.

2. The adequacy of the tax base warrants further investigation. The tax base from which Florida generates its education revenues is severely limited. By constitutional prohibition, Florida cannot impose a state personal income tax or a state property tax. Consequently, the state has relied on sales tax, corporate income tax, and a variety of specific consumption taxes for general revenue collection. This taxing base has been too volatile and narrowly based to adequately support an educational system with growing enrollments, increased diversity, goals of high achievement, and facilities needs. This unpredictability has undermined the stability of educational funding at the state level. The state lottery has also contributed to the decline in revenue for education since its inception in 1987, forcing districts to compensate for the shortage in state funding. Property taxes have been the only source of local revenue for K-12. They were strictly capped by the state constitution and statutory law.

3. The accountability legislation in Florida and its subsequent impact on funding and equity bear closer examination. Schools are required to publish data on their schools's characteristics including information on per-pupil funding, school-level expenditures, and teachers salaries. As these data become more available, the pressure may grow for an accounting of intra-school variation. Florida's decentralization strategy could result in a shift in litigation and political focus from the state to the district level. This shift and the consequent impact on funding and equity merit further study.

These recommended studies would be informative to researchers and practitioners. However, the role of education finance studies will become more complex. Future technical analyses of educational funding equity and adequacy will be framed in the context of the economy, public perception of tax fairness and tax burden, and the public understanding of school accountability. Future solutions to public school funding will emerge from the results of studies on educational funding coupled with an understanding of the increasingly complex dynamics of a political economy.

Notes

1. David C. Thompson, R. Craig Wood, and David S. Honeyman, Fiscal Leadership for Schools: Concepts and Practices (White Plains, NY: Longman Publishing Group, 1994), 7; Lynn Olson, "Resources," Quality Counts, A Report Card on the Condition of Public Education in the 50 States, Education Week 16 (January 22, 1997): 54-57.

2. David Vaughan, "The Impact of Florida's 1973 School Finance Reform on Poor and Minority Children," in Minorities, the Poor, and School Finance Reform, ed. Robert Brischetto (Washington DC: National Institute of Education, 1979); Stephen J. Carroll and Rolla E. Park, The Search for Equity in School Finance (Cambridge, MA: The Ballinger Press, 1983), 29; Kern Alexander and Lee Shiver, "Equalization Among Florida School Districts," Journal of Education Finance 9 (Spring 1983): 53-62.

3. Steven D. Stark, David S. Honeyman, and R. Craig. Wood, "The Florida Lottery: Its Use as a Substitute for Existing Funds and its Effects on the Equity of School Funding," Journal of Education Finance 18 (Winter 1993): 231-242.

4. J. Michael O'Loughlin, The Effects of Additional Revenues for Sparsity on the Equity of a State School Finance Program (Doctoral Dissertation, University of Florida, Gainesville, 1992), 133-136.

5. Jeffrey R. Maiden and R. Craig. Wood, "An Examination of the Discretionary Elements of the Florida Education Finance Program," Journal of Education Finance 21 (Fall 1995): 271-290.

6. Mary L. Chambers, The Effects of Additional Revenues from Capital Outlay Transfers on the Equity of a State School Finance System (Doctoral Dissertation, University of Florida, Gainesville, 1996), 93-94.

7. Lenford C. Sutton, Sr., An Examination of Exceptional Student Funding in the State of Florida (Doctoral Dissertation, University of Florida, Gainesville, 1998), 117-121.

8. Yasser Nakib and Carolyn D. Herrington, "The Political Economy of K-12 Education Finance: the Context of a Fast Growing Large State," Journal of Education Finance, 23 (Winter, 1998): 351-373.

9. Tom Owens and Jeffrey R. Maiden, "A Comparison of Interschool and Interdistrict Funding Equity in Florida," Journal of Education Finance 24 (Spring, 1999): 503-518.

10. Florida Department of Education, Florida Education Finance Program. 1997-98, Statistical Report. Tallahassee, FL., 4.

11. Florida Department of Education, Florida Education Finance Program. 1999-00, Statistical Report. Tallahassee, FL, 26-29.

12. Fla. Stat. sec. 200.001(3); Florida Department of Education, Florida Education Finance Program. 1996-97, Statistical Report, Tallahassee, FL, 2-3.

13. Fla. Const. Art. IX

APPENDIX A
1996-1997 FEFP PROGRAM COST FACTORS

	1996-97 Cost Factors
Basic Programs	
Kindergarten and Grades 1, 2, and 3	1.049
Grades 4, 5, 6, 7, and 8	1.000
Grades 9, 10, 11, and 12	1.190
Mainstream	
Grades K-3	2.098
Grades 4-8	2.000
Grades 9-12	2.380
Programs for At-Risk Student	
Dropout Prevention	1.474
Teenage Parent	1.474
Intensive English/ESOL K-3	1.280
Intensive English/ESOL 4-8	1.280
Intensive English/ESOL 9-12	1.280
Exceptional Student Programs	
Educable Mentally Handicapped	1.979
Trainable Mentally Handicapped	3.111
Physically Handicapped	3.111
Physical & Occupational Therapy, Part-Time	12.690
Speech, Language, and Hearing Therapy, Part-Time	5.333
Speech, Language, and Hearing	2.777
Visually Handicapped, Part-Time	17.069
Visually Handicapped	5.333
Emotionally Handicapped, Part-Time	4.287
Emotionally Handicapped	2.777
Specific Learning Disability, Part-Time	2.777
Specific Learning Disability	1.979
Gifted, Part-Time	1.710
Hospital & Homebound, Part-Time	12.690
Profoundly Handicapped	4.287
Adult General Education Programs	
Adult Basic Skills	.802
Adult Secondary Education	.802
Adult Disabled	.962

Vocational-Technical Programs

	<u>Job Preparatory</u>		<u>Adult</u>
	7-12	Adult	Supplemental
Agriculture	1.513	1.477	1.477
Business and Office	1.248	1.373	1.373
Distributive	1.174	1.293	1.293
Diversified	1.232	.948	—
Health	1.333	1.488	1.488
Public Service	1.119	1.155	1.155
Home Economics	1.277	1.265	1.265
Industrial	1.743	1.473	1.473
Exploratory (Grades 6-12)	1.198	—	—
Vocational Mainstream (Grades 6-12)	1.966	—	—

APPENDIX B
1996-1997 FEFP RAW DATA

Table B-1. District Millage Rates, Weighted FTE, and 1996-1997 Tax Roll

District	Required Local Effort Millage	Discretionary Operating Millage	Capital Outlay/ Maintenance Millage	Supplemental Discretionary Millage	WFE	1996 Tax Roll
Alachua	6.7870	0.5100	1.7410	0.2500	36,771.07	4,467,591,409.00
Baker	7.0500	0.5100	2.0000	0.2500	5,714.22	274,103,616.00
Bay	6.4660	0.5100	2.0000	0.2500	34,285.54	4,382,366,382.00
Bradford	6.8640	0.5100	2.0000	0.2500	5,554.05	384,375,450.00
Brevard	6.9020	0.5100	2.0000	0.2500	82,736.55	14,113,682,738.00
Broward	6.6480	0.5100	2.0000	0.2240	297,132.81	57,345,541,713.00
Calhoun	6.6770	0.0000	0.0000	0.0000	2,767.44	194,217,947.00
Charlotte	6.8440	0.5100	1.8150	0.1370	20,906.13	6,351,422,505.00
Citrus	7.1180	0.5100	2.0000	0.1880	18,669.42	4,300,117,602.00
Clay	6.8230	0.5100	1.7500	0.2500	31,942.20	3,130,727,219.00
Collier	6.0870	0.5100	2.0000	0.0890	38,991.03	18,083,131,561.00
Columbia	6.7000	0.5100	2.0000	0.2500	11,554.62	868,636,550.00
Dade	6.5960	0.5100	2.0000	0.2500	467,092.88	77,605,000,000.00
De Soto	6.4630	0.5100	1.5000	0.2500	6,179.38	637,450,547.00
Dixie	6.7470	0.5100	2.0000	0.2500	2,962.04	186,185,053.00
Duval	6.4700	0.5100	2.0000	0.2500	157,290.91	23,013,839,292.00
Escambia	6.8560	0.5100	2.0000	0.2500	59,968.46	5,956,369,950.00
Flagler	6.6960	0.5100	2.0000	0.1600	8,706.40	2,265,705,582.00
Franklin	6.4840	0.5100	0.4970	0.1630	1,904.11	537,080,857.00
Gadsden	6.4730	0.5100	2.0000	0.2500	10,293.67	599,629,082.00
Gilchrist	7.0270	0.5100	2.0000	0.2500	3,236.30	204,969,917.00
Glades	6.4690	0.5100	1.5440	0.1680	1,344.03	344,650,957.00
Gulf	6.4800	0.5100	0.8200	0.2080	2,908.26	592,289,382.00
Hamilton	6.4910	0.5100	2.0000	0.2500	2,953.17	456,655,382.00
Hardee	6.4750	0.5100	2.0000	0.2500	6,584.93	819,803,583.00
Hendry	6.9550	0.5100	2.0000	0.2500	9,175.17	1,114,876,940.00
Hernando	6.4670	0.5100	2.0000	0.2300	19,274.26	3,635,510,212.00
Highlands	6.5690	0.5100	1.9200	0.2490	14,339.09	2,371,702,025.00
Hillsborough	6.7580	0.5100	2.0000	0.2500	197,633.01	27,154,169,011.00
Holmes	6.6940	0.0000	2.0000	0.0000	4,528.65	210,068,473.00

Table B-1--continued.

District	Required Local		Discretionary Current		Capital Outlay/ Maintenance		Supplemental Discretionary	
	Effort Millage	Millage	Operating Millage	Millage	Millage	WFTE	1996 Tax Roll	
Indian River	6.4740	0.5100	0.5100	2.0000	0.1250	17,971.00	5,940,864,817.00	
Jackson	6.4680	0.5100	0.5100	0.0000	0.2500	11,204.38	658,065,054.00	
Jefferson	6.8110	0.5100	0.5100	0.7500	0.2500	2,778.86	243,672,997.00	
Lafayette	6.8500	0.5100	0.5100	2.0000	0.2500	1,276.97	113,566,554.00	
Lake	6.4680	0.5100	0.5100	2.0000	0.2500	33,048.47	5,475,398,323.00	
Lee	6.7020	0.5100	0.5100	2.0000	0.1360	70,481.48	21,300,171,610.00	
Leon	6.4770	0.5100	0.5100	2.0000	0.2500	45,149.07	6,350,363,823.00	
Levy	7.1390	0.5100	0.5100	2.0000	0.2500	7,533.02	744,973,315.00	
Liberty	7.0990	0.5100	0.5100	0.0000	0.2500	1,534.45	108,391,332.00	
Madison	6.5170	0.5100	0.5100	0.0000	0.2500	4,345.78	279,043,283.00	
Manatee	6.6680	0.5100	0.5100	2.0000	0.1840	43,343.68	9,704,554,081.00	
Marion	6.9320	0.5100	0.5100	1.1800	0.2500	45,527.43	5,626,766,280.00	
Martin	6.7450	0.5100	0.5100	2.0000	0.1020	20,249.02	8,569,017,242.00	
Monroe	5.0740	0.5100	0.5100	0.6000	0.0690	12,048.03	7,326,075,177.00	
Nassau	6.8980	0.5100	0.5100	1.7500	0.2500	12,230.47	1,937,311,641.00	
Okaloosa	6.5160	0.5100	0.5100	1.2960	0.2500	36,369.05	4,913,906,551.00	
Okeechobee	6.7030	0.5100	0.5100	2.0000	0.2500	8,394.99	846,528,594.00	
Orange	6.4700	0.5100	0.5100	2.0000	0.1970	167,583.46	37,162,825,492.00	
Osceola	6.7870	0.5100	0.5100	2.0000	0.2500	35,528.31	5,828,923,862.00	
Palm Beach	6.6090	0.5100	0.5100	2.0000	0.1330	184,787.79	57,150,689,348.00	
Pasco	6.4680	0.5100	0.5100	2.0000	0.2500	57,200.54	7,606,876,334.00	
Pinellas	6.4790	0.5100	0.5100	2.0000	0.1870	148,685.89	32,223,393,033.00	
Polk	6.8260	0.5100	0.5100	1.7500	0.2500	95,438.74	12,541,468,245.00	
Putnam	6.4630	0.5100	0.5100	2.0000	0.2500	16,258.97	2,101,714,377.00	
St. Johns	6.5150	0.5100	0.5100	2.0000	0.1990	22,011.17	4,962,753,426.00	
St. Lucie	6.6020	0.5100	0.5100	2.0000	0.1920	34,760.46	7,493,469,030.00	
Santa Rosa	6.5600	0.5100	0.5100	1.7300	0.2500	25,369.12	3,008,306,743.00	
Sarasota	6.4830	0.5100	0.5100	2.0000	0.1010	46,623.00	18,144,146,644.00	
Seminole	6.6280	0.5100	0.5100	2.0000	0.2500	67,650.74	11,656,485,274.00	
Sumter	6.6670	0.5100	0.5100	1.9400	0.2500	7,193.38	652,943,574.00	

Table B-1--continued.

District	Required Local Effort Millage	Discretionary Current Operating Millage	Capital Outlay/ Maintenance Millage	Supplemental Discretionary Millage	WFTE	1996 Tax Roll
Suwannee	6.8050	0.5100	2.0000	0.2500	7,296.73	558,328,565.00
Taylor	6.4690	0.5100	1.7500	0.2500	4,979.56	634,661,307.00
Union	6.8520	0.5100	2.0000	0.0000	2,874.41	103,668,616.00
Volusia	6.7570	0.5100	2.0000	0.2300	73,399.53	13,161,252,388.00
Wakulla	6.7960	0.5100	2.0000	0.2500	5,638.76	320,220,808.00
Walton	6.4770	0.5100	2.0000	0.1320	6,395.71	2,100,955,492.00
Washington	6.8270	0.5100	0.0000	0.2500	4,993.19	366,364,849.00

Table B-2. District Foundation Revenue

District Name	State Foundation Revenue	Required Local Effort Revenue	Total Foundation Revenue
Total	8,596,316,556	3,685,166,129,371	3,693,762,445,926
Alachua	103,163,284	30,321,542,893	30,424,706,177
Baker	15,339,313	1,932,430,493	1,947,769,806
Bay	95,670,801	28,336,381,026	28,432,051,827
Bradford	15,048,449	2,638,353,089	2,653,401,538
Brevard	238,531,013	97,412,638,258	97,651,169,270
Broward	899,384,860	381,233,161,308	382,132,546,168
Calhoun	7,271,792	1,296,793,232	1,304,065,024
Charlotte	59,286,480	43,469,135,624	43,528,422,104
Citrus	50,719,874	30,608,237,091	30,658,956,965
Clay	89,541,204	21,360,951,815	21,450,493,020
Collier	115,307,322	110,072,021,812	110,187,329,134
Columbia	31,178,859	5,819,864,885	5,851,043,744
Dade	1,448,383,402	511,882,580,000	513,330,963,402
DeSoto	17,135,048	4,119,842,885	4,136,977,933
Dixie	7,980,660	1,256,190,553	1,264,171,212
Duval	446,235,379	148,899,540,219	149,345,775,599
Escambia	165,765,014	40,836,872,377	41,002,637,392
Flagler	24,370,511	15,171,164,577	15,195,535,088
Franklin	5,316,579	3,482,432,277	3,487,748,856
Gadsden	28,163,023	3,881,399,048	3,909,562,071
Gilchrist	8,804,423	1,440,323,607	1,449,128,029
Glades	3,864,296	2,229,547,041	2,233,411,337
Gulf	7,900,126	3,838,035,195	3,845,935,321
Hamilton	7,967,941	2,964,150,085	2,972,118,026
Hardee	17,772,537	5,308,228,200	5,326,000,737
Hendry	25,573,118	7,753,969,118	7,779,542,236
Hernando	53,558,620	23,510,844,541	23,564,403,161
Highlands	40,062,086	15,579,710,602	15,619,772,688
Hillsborough	573,175,300	183,507,874,176	184,081,049,477
Holmes	12,226,653	1,406,198,358	1,418,425,011
IndianRiver	52,145,665	38,461,158,825	38,513,304,491
Jackson	29,855,282	4,256,364,769	4,286,220,051
Jefferson	7,663,531	1,659,656,783	1,667,320,313
Lafayette	3,433,118	777,930,895	781,364,013
Lake	92,420,973	35,414,876,353	35,507,297,326
Lee	205,416,139	142,753,750,130	142,959,166,269
Leon	127,864,701	41,131,306,482	41,259,171,183
Levy	20,081,321	5,318,364,496	5,338,445,817
Liberty	4,179,419	769,470,066	773,649,485
Madison	11,659,530	1,818,525,075	1,830,184,606
Manatee	126,159,753	64,709,966,612	64,836,126,365
Marion	125,396,292	39,004,743,853	39,130,140,145
Martin	59,162,575	57,798,021,297	57,857,183,873
Monroe	38,288,861	37,172,505,448	37,210,794,309
Nassau	34,053,262	13,363,575,700	13,397,628,961

Table B-2--continued

District Name	State Foundation Revenue	Required Local Effort Revenue	Total Foundation Revenue
Okaloosa	102,088,351	32,019,015,086	32,121,103,437
Okeechobee	23,425,485	5,674,281,166	5,697,706,651
Orange	482,853,416	240,443,480,933	240,926,334,350
Osceola	100,597,476	39,560,906,251	39,661,503,728
PalmBeach	550,020,542	377,708,905,901	378,258,926,443
Pasco	159,080,061	49,201,276,128	49,360,356,190
Pinellas	434,812,703	208,775,363,461	209,210,176,164
Polk	268,175,595	85,608,062,240	85,876,237,836
Putnam	44,119,236	13,583,380,019	13,627,499,255
St.Johns	63,625,272	32,332,338,570	32,395,963,842
St.Lucie	98,372,715	49,471,882,536	49,570,255,251
SantaRosa	68,662,612	19,734,492,234	19,803,154,846
Sarasota	138,664,662	117,628,502,693	117,767,167,355
Seminole	194,998,940	77,259,184,396	77,454,183,336
Sumter	19,622,113	4,353,174,808	4,372,796,921
Suwannee	19,381,303	3,799,425,885	3,818,807,188
Taylor	13,690,560	4,105,623,995	4,119,314,555
Union	7,854,213	710,337,357	718,191,570
Volusia	207,273,091	88,930,582,386	89,137,855,477
Wakulla	15,764,024	2,176,220,611	2,191,984,635
Walton	17,474,165	13,607,888,722	13,625,362,887
Washington	13,281,629	2,501,172,824	2,514,454,453

REFERENCES

- Agresti, Alan, and Barbara Finlay Agresti. Statistical Methods for the Social Sciences. San Francisco: Dellen Publishing Co., 1986.
- Alexander, Kern. "The Purpose of Education: Peace, Capitalism and Nationalism." Journal of Education Finance (Fall 1994): 17-28.
- Alexander, Kern, and M. David Alexander. American Public School Law. 3rd ed. St. Paul, MN: West Publishing, 1992.
- Alexander, Kern, Roe L. Johns, and K. Forbis Jordan. Financing Education: Fiscal and Legal Alternatives. Columbus, OH: Charles Merrill Company, 1972.
- Alexander, Kern, and K. Forbis Jordan. Educational Need in the Public Economy. Gainesville, FL: University Presses of Florida, 1976.
- Alexander, Kern, and Richard G. Salmon. Public School Finance. Needham Heights, MA: Allyn and Bacon, 1995.
- Alexander, Kern, and Lee Shiver. "Equalization Among Florida School Districts." Journal of Education Finance 9 (Summer 1983): 53-62.
- Augenblick, John G., John L. Myers, and Amy Berk Anderson. "Equity and Adequacy in School Funding." Financing Schools 7(3) (Winter 1997): 63-78.
- Barro, Stephen M. "What Does the Education Dollar Buy?: Relationships of Staffing, Staff Characteristics, and Staff Salaries to State Per-pupil Spending." Los Angeles, CA: The Finance Center of Consortium for Policy Research and Evaluation (CPRE), Working Paper, 1994.
- Benson, Charles. The Economics of Public Education. Boston: Houghton Mifflin, 1978.
- Berne, Robert. "Alternative Equity and Equality Measures." Selected School Finance Papers. Washington, DC: U.S. Department of Health, Education, and Welfare, 1978, 19.
- Berne, Robert. "Equity Issues in School Finance." Journal of Education Finance 14 (Fall 1988): 159.

- Berne, Robert. "Program Equity for All Children; Meaningful Goal or Impossible Dream?" Journal of Education Finance 8(4) (December 1994): 502-517.
- Berne, Robert, and Leanna Stiefel. The Measurement of Equity in School Finance. Baltimore: The Johns Hopkins University Press, 1984.
- Brown, Rhodella. A Study of Equity in a Multi-Institution Community College System Prior to and After Implementing Performance-Based Funding. Doctoral Dissertation, University of Florida, Gainesville, FL, 1999.
- Burrup, Percy, Vern Brimley, Jr., and Rulon Garfield. Financing Education in a Climate of Change. 5th ed. Boston: Allyn and Bacon, 1993.
- Butts, R. Freeman, and Lawrence Cremin. A History of Education in American Culture. New York: Henry Holt and Company, 1953.
- Camp, William E., and David C. Thompson. "School Finance Litigation." Journal of Educational Finance 14 (Fall 1988): 222.
- Campbell, Colin E. "An Argument for Local Property Tax Financing of Public Schools." Research Note. Concord, NH: Josiah Bartlett Center for Public Policy (January 1999).
- Carroll, Stephen J. The Search for Equity in School Finance: Results from Five States. Santa Monica, CA: The Rand Corporation, 1979.
- Carroll, Stephen J., and Rolla E. Park. The Search for Equity in School Finance. Cambridge, MA: The Ballinger Press, 1983.
- Chambers, Mary L. M. The Effects of Additional Revenues from Capital Outlay Transfers on the Equity of a State School Finance System. Doctoral Dissertation, University of Florida, Gainesville, 1996.
- Clune, William H. "The Shift from Equity to Adequacy in School Finance." Educational Policy 8(4) (December 1994): 376-391.
- Clune, William H. "The Cost and Management of Program Adequacy: An Emerging Issue in Educational Policy and Finance." Educational Policy 8(4) (December 1994): 365-375.
- Coleman, James. "The Concept of Equality of Educational Opportunity." Harvard Educational Review 38 (Winter 1968): 17-22.
- Cubberly, Elwood P. School Funds and Their Apportionment. New York: Columbia University, 1906.

- Currie, Gaylon D. An Examination of the Equity of Capital Outlay Funding in the State of Florida and the Equity of General Expenditures for Education. Doctoral Dissertation, University of Florida, Gainesville, 1992.
- Darling-Hammond, Linda. "Unequal Opportunity; Race and Education." The Brookings Review, The Brookings Institution, 16(2) (Spring 1998): 28-32.
- Division of Public Schools. 1996-97 Florida Education Finance Program. Tallahassee, FL: Florida Department of Education, 1996.
- Edward, Virginia B., ed. "Quality Counts: A Report Card on the Condition of Public Education in the 50 States." Education Week, Vol. 16 (January 22, 1997, supplement): 3-235.
- Ferguson, Richard. "Paying for Public Education: New Evidence on How and Why Money Matters." Harvard Journal of Legislation (Summer 1991): 465-498.
- Fla. Const. art. VII sec. 9.
- Fla. Const. art. IX, sec. 1.
- Florida Department of Education v. Glasser, 622 So. 2d 944 (Fla. 1993).
- Florida Education Finance Program, 1996-97, Statistical Report. Tallahassee, FL: Author, 1997.
- Florida Legislature, Office of Program Policy Analysis and Government Accountability. Florida's Education Finance System Compared to Other States, Report No. 95-43, March 11, 1996, 7.
- Florida Legislature, Office of Program Policy Analysis and Government Accountability, Florida's Education Funding System, Report No. 95-50. Tallahassee, FL: The Florida Legislature, April 8, 1996, 1-2.
- Florida Legislature, Office of Program Policy Analysis and Government Accountability. Public Schools and Performance-Based Program Budgeting, Report No. 97-35. Tallahassee, FL: The Florida Legislature, January 1998.
- Fla. Stat. sec. 200.001(3), 1996.
- Fla. Stat. sec. 200.071, 1996.
- Fla. Stat. sec. 236.012, 1996.
- Fla. Stat. sec. 236.081, 1996.
- Fla. Stat. sec. 236.25, 1996.

- Garms, Walter, James Guthrie, and Lawrence Pierce. School Finance: The Economics and Politics of Public Education. Englewood Cliffs, NJ: Prentice-Hall, 1988.
- Goertz, Margaret E., and Mark C. Duffy. "Resource Allocation in Reforming Schools and School Districts." In School-based Financing (Twentieth Annual Yearbook of American Education Finance Association), edited by Margaret E. Goertz and Allan Odden. Thousand Oaks, CA: Corwin Press, 1999.
- Goertz, Margaret E., and G. Alfred Hess, Jr. "Process and Power in School Budgeting Across Four Large Urban Districts." Journal of Education Finance 23(4) (Spring 1998): 490-506.
- Goertz, Margaret E., and Leanna Stiefel. "School-Level Resource Allocation in Urban Public Schools. Introduction to Special Issue." Journal of Education Finance 23(4) (Spring 1998): 435-446.
- Gold, Steven D., David M. Smith, Stephen B. Lawton, and Andrea Hyary, eds. Public School Finance Programs of the United States and Canada, 1993-94, vol. 1 and 2. New York: American Education Finance Association, Nelson A. Rockefeller Institute of Government, 1995.
- Guthrie, James, Walter Garms, and Lawrence Pierce. School Finance Education Policy: Enhancing Educational Efficiency, Equality, and Choice. 2nd ed. Englewood Cliffs NJ: Prentice Hall, 1988.
- Hanushek, Eric A. "The Impact of Differential Expenditures on School Performance." Educational Researcher 18(4) (1989): 45-65.
- Hanushek, Eric A. "A Jaundiced View of Adequacy in School Finance Reform." Educational Policy 8(4) (December 1994): 460-469.
- Hanushek, Eric A. Improving the Performance of America's Schools. Washington DC: National Academy Press, 1996.
- Hanushek, Eric A. "Measuring Investment in Education." Journal of Economic Perspectives 10(4) (Fall 1996): 9-30.
- Hanushek, Eric A. "A More Complete Picture of School Resource Policies." Review of Educational Research 66(3) (Fall 1996): 397-409.
- Hanushek, Eric A. "Assessing the Effects of Resources on Student Performance: An Update." Educational Evaluation and Policy Analysis 19(2) (Summer 1997): 141-164.
- Hanushek, Eric A., and Steven G. Rivkin. "Understanding the 20th Century Growth in U. S. School Spending." Rochester, NY: Rochester Center for Economic Research, 1994.

- Harp, Lonnie. "Michigan Law Bans Property Tax Use to Fund Schools." Education Week (August 4, 1993): <http://www.edweek.org/ew/1993/40prop.h12>
- Harp, Lonnie. "Michigan Officials Scramble in Wake of Property-Tax Decision." Education Week (September 8, 1993): <http://www.edweek.org/ew/1993/01ich.h13>
- Harris Bowan, Darcia. "Arizona Leaders Urge Tax Hike for Education." Education Week (April 5, 2000): http://www.edweek.or/ew/ew_printstore.cfm?slug=30ariz.h19
- Hedges, Larry V., R. Laine, and R. Greenwald. "Does Money Matter? A Meta-analysis of Studies of the Effects of Differential School Inputs on Student Outcomes," Educational Researcher 23(3) (1994): 9.
- Hirth, Marilyn. "Systemic Reform, Equity and School Finance Reform." Educational Policy 10 (December 1996): 468.
- Hoff, David J. "GAO Documents Persistent School Inequities." Education Week (March 4, 1998): <http://www.edweek.org/ew/1998/25gao.h17>
- Honeyman, David S. "School Facilities and State Mechanisms that Support School Construction: A Report from Fifty States." Journal of Education Finance 16 (Fall 1990): 247-272.
- Honeyman, David S. Quoted in Lynn Olson, "Keeping Tabs on Quality. Quality Counts, A Report Card on the Condition of Public Education in the 50 States." Education Week, 16 (January 22, 1997): 7-17.
- Jefferson, Thomas. The Writings of Thomas Jefferson. New York, NY: The Library of America, 1984.
- Johns, Roe L. The Evolution of the Equalization of Educational Opportunity in Florida 1926 to 1976. Gainesville, FL: Institute for Education Finance, 1976.
- Johns, Roe L., and Edgar L. Morphet. The Economics and Financing of Education. 3d ed. Englewood Cliffs, NJ: Prentice-Hall, 1975.
- Johns, Roe L. Edgar L. Morphet, and Kern Alexander. The Economics and Financing of Education. 4th ed. Englewood Cliffs, NJ: Prentice Hall, 1983.
- Johnson, Robert C. "Study Reveals Gaps Across States." Education Week 16(25) (March 19, 1997): 1, 30.
- Johnson, Robert C. "Study Documents Shifts in Districts' Spending." Education Week (January 14, 1998): <http://www.edweek.org/ew/vol-17/18spend.h17>

Johnson, Robert C. "Report Finds No Easy Solutions for Disparities in School Funding." Education Week (January 24, 1998): <http://www.edweek.org/ew/1998/41gao.h17>

Jones, Thomas H. Introduction to School Finance. New York: Macmillan, 1985.

Jordan, Forbis, and Mary P. McKeown. "Equity in Financing Public Elementary and Secondary Schools." In School Finance Policies and Practices, edited by James W. Gurthrie. Cambridge, MA: Ballinger, 1980.

Kozol, Jonathan. Savage Inequalities: Children in America's Schools. New York: Crown, 1991.

Ladd, Helen F., Rosemary Chalk, and Janet S. Hansen, eds. Equity and Adequacy in Education Finance: Issues and Perspectives. Committee on Education Finance, National Research Council. Washington, DC: National Academy Press, 1999.

Ladd, Helen F., and Janet S. Hansen, eds. Making Money Matter: Financing America's Schools. Committee on Education Finance, National Research Council. Washington, DC: National Academy Press, 1999.

Laws of Florida (1851), Chapter 343, p. 104 cited in Pyburn, 56.

Lindsay, Drew. "States Do Not Spend Enough to Fix, Build Schools, Report Says." Education Week, 16 (January 10, 1996): <http://www.edweek.org/ew/1996/16gao.h15>

Maiden, Jeffrey R., and R. Craig Wood. "An Examination of the Discretionary Elements of the Florida Education Finance Program." Journal of Education Finance 21 (Fall 1995): 271-290.

Miles, Karen S. Rethinking School Spending: A Case Study of Boston Public Schools. Cambridge, MA: National Center for Educational Leadership, 1993.

Miles, Karen S. Spending More at the Edges: Understanding the Growth in Public School Spending from 1967 to 1991. Doctoral Dissertation, Harvard University, Cambridge, MA, 1997.

Monk, David. Educational Finance: An Economic Approach. New York: McGraw-Hill, 1990).

Monk, David H. "Policy Challenges Surrounding the Shift Toward Outcome-Oriented School Finance Equity Standards." Educational Policy (8)4 (December 1994): 471-486.

Moore, David S. Statistics. 3rd ed. New York: W. H. Freeman, 1991.

Morrison, Henry. School Revenue. Chicago: University of Chicago Press, 1930.

- Mort, Paul. The Measurement of Educational Need. New York: Teachers College, Columbia University, 1924.
- Mort, Paul. State Support for Public Schools. New York: Teachers College, Columbia University, 1926.
- Mort, Paul, and Walter C. Reusser. Public School Finance. New York: McGraw-Hill, 1951.
- Nakib, Yasser, and Carolyn D. Herrington. "The Political Economy of K-12 Education Finance: The Context of a Fast Growing Large State." Journal of Education Finance 23 (Winter, 1998): 351-373.
- National Center for Education Statistics. The Digest of Education Statistics. Washington DC: Government Printing Office, 1994.
- Odden, Allan. "Funding Crisis Forces Action in Michigan." NCREL Policy Seminar (Winter 1994). <http://www.ncrel.org/sdrs/areas/issues/envrnmnt/go/94-wodd.htm>
- Odden, Allan. "Productive Discussions About the Education Dollar." Education Week (February 7, 1996): <http://www.edweek.org/ew/vol-15/20odd.h15>;
- Odden, Allan. "Creating School Finance Policies That Facilitate New Goals." CPRE Policy Briefs, Graduate School of Education, University of Pennsylvania (September 1998).
- Odden, Allan, Priscilla Wohlstetter, and Eleanor Odden. "Key Issues in Effective Site-Based Management." School Business Affairs 61(5) (May 1995): 4-12, 14, 16.
- Odden, Allan, David Monk, Yasser Nakib, and Lawrence Picus. "The Story of the Education Dollar: No Academy Award and No Fiscal Smoking Guns." Phi Delta Kappan (October 1995): 163.
- O'Loughlin, J. Michael, R. Craig Wood, and David S. Honeyman. A Study of the Effects of the Sparsity Supplement on the Equity of the Florida Education Finance Program. Gainesville, FL: UCEA Center for Education Finance, 1992.
- Olson, Lynn. "The State of the States." In Quality Counts, A Report Card on the Condition of Public Education in the 50 States. Edited by Virginia B. Edward. Supplement to Education Week, 16 (January 22, 1997): 3.
- Olson, Lynn. "Keeping Tabs on Quality." In Quality Counts, A Report Card on the Condition of Public Education in the 50 States. Edited by Virginia B. Edward. Supplement to Education Week, 16 (January 22, 1997): 7-17.

- Owens, Tom, and Jeffrey R. Maiden. "A Comparison of Interschool and Interdistrict Funding Equity in Florida." Journal of Education Finance 24 (Spring, 1999): 503-518.
- Picus, Lawrence O. "Achieving Program Equity: Are Markets the Answer?" Educational Policy 8(4) (December 1994): 568-581.
- Picus, Lawrence O. "Does Money Matter in Education? A Policymaker's Guide." In Selected Papers in School Finance, edited by W. Fowler. Washington, DC: National Center for Education Statistics, 1995.
- Picus, Lawrence O. "What Does the Money Buy? Allocation and Use of Educational Resources." School Financial Equity (August 1995): 13-21.
- Picus, Lawrence O., and Yasser Nakib. Resource Allocation Patterns in High Performing Florida Schools. Los Angeles, CA: Center for Research in Education Finance, 1995.
- Pipho, Chris. "The New Climate for School Finance." Phi Delta Kappan 75(8) (April 1994): 584.
- Pollock, A. D. The Evolution of the Organizational Structure of Local Public Education in Florida 1945-47. Doctoral Dissertation, Florida State University, Tallahassee, Florida, 1969.
- Raphael, David D. Problems of Political Philosophy. London: Macmillan, 1976.
- Rawls, John. A Theory of Justice. Cambridge, MA: The Belknap Press of Harvard University, 1971.
- Renchler, Ron. "Financial Equity in Schools." ERIC Clearinghouse on Educational Management, Eugene, OR (January 1992). Retrieved online: http://www.ed.gov/databases/ERIC_Digests/ed350717.html
- Rossmiller, Richard. "Achieving Equity and Effectiveness in Schooling." Journal of Education Finance 12 (Spring 1987): 562-563.
- Rossmiller, Richard. "Equity or Adequacy of School Funding." Educational Policy 8(4) (December 1994): 616-618.
- Rothstein, Richard, and Karen S. Miles. Where's the Money Gone? Washington, DC: Economic Policy Institute, 1995.
- Sandham, Jessica L. "State Voters OK More Spending for Education." Education Week 20(11) (November 15, 2000): <http://www.edweek.org/ew/wstory.cfm?slug=11ballot.h20&keywords=Education%20Finance>

- Seay, J. W. "Florida." In Education in the States: Nationwide Development Since 1900. Edited by Jim B. Pearson and Edgar Fuller. Washington, DC: National Education Association of the United States, 1969.
- Shiver, Lee A. A Historical Review of the Development of Florida's School Finance Plan and the Fiscal Equalization Effects of the Florida Education Finance Program. Doctoral Dissertation, University of Florida, Gainesville, 1982.
- Sparkman, William E. "School Finance Challenges in State Courts." In The Impact of Litigation and Legislation on Public School Finance, edited by Julie K. Underwood and Deborah A. Verstegen. New York: Harper and Row, 1990).
- Stark, Steven D., David S. Honeyman, and R. Craig Wood. "The Florida Lottery: Its Use as a Substitute for Existing Funds and its Effects on the Equity of School Funding." Journal of Education Finance 18 (Winter 1993): 231-242.
- Stellar, Arthur. "Implications for Programmatic Excellence and Equity." In The Fiscal, Legal, and Political Aspects of Elementary and Secondary Education, edited by Van D. Mueller and Mary McKeown. Cambridge, MA: Ballinger, 1986.
- Stiefel, Leanne, Ross Rubenstein, and Robert Berne. "Intra-District Equity in Large Cities: Data, Methods, and Results." Journal of Education 23(4) (Spring 1998): 447-467.
- Strayer, George D., and Robert M. Haig. The Financing of Education in the State of New York. Vol. 1. New York: Macmillan, 1923.
- Summers, Susan R. An Examination of Supplantation and Redistribution Effects of Lottery Allocations to a Community College System. Doctoral Dissertation, University of Florida, Gainesville, 1993.
- Sutton, Lenford C. An Examination of Exceptional Student Funding in the State of Florida. Doctoral Dissertation, University of Florida, Gainesville, 1998.
- Swanson, Austin, and Richard King. School Finance: Its Economics and Politics. 2nd ed. New York: Longman, 1997.
- Thompson, David C. "School Finance and the Courts: A Reanalysis of Progress." West's Education Law Reporter 59 (June 21, 1990): 950-951.
- Thompson, David, R. Craig Wood, and David S. Honeyman. Fiscal Leadership for Schools: Concepts and Practices. White Plains, NY: Longman, 1994.
- Thro, William. "The Third Wave: The Impact of the Montana, Kentucky, and Texas Decisions on the Future of Public School Reform Litigation." Journal of Law and Education 19 (Spring 1990): 229.

- Updegraff, Harlan. Rural School Survey of New York State: Financial Support. Ithaca, NY: The Joint Committee on Rural Schools, 1922.
- Updegraff, Harlan, and Leroy King. Survey of the Fiscal Policies of the State of Pennsylvania in the Field of Education. Philadelphia: University of Pennsylvania, 1922.
- U. S. CONST. amend. X.
- U. S. CONST. amend. XIV sec. 1.
- Underwood, Julie K. "School Finance Litigation: Legal Theories, Judicial Activism, and Social Neglect." Journal of Education Finance 20 (Fall 1994): 16.
- Underwood, Julie, and Deborah Verstegen. Eds. "School Finance Challenges in the Federal Courts: Changing Equal Protection Analysis." The Impact of Litigation and Legislation on Public School Finance. New York: Harper & Row, 1994.
- Vaughan, David. "The Impact of Florida's 1973 School Finance Reform on Poor and Minority Children." In Minorities, the Poor, and School Finance Reform, edited by Robert Brischetto. Washington DC: National Institute of Education, 1979.
- Verstegen, Deborah A. "Two Hundred Years of Federalism: A Perspective on National Fiscal Policy in Education." Journal of Education Finance 12 (Spring, 1987): 576-518.
- Verstegen, Deborah A. School Finance at a Glance. Denver, CO: Education Commission of the States, 1990.
- Verstegen, Deborah A. "Financing Education Reform: Where Did All The Money Go?" Journal of Education Finance (19) (Summer 1993): 1-35.
- Verstegen, Deborah A. "The New Wave of School Finance Litigation." Phi Delta Kappan (November 1994): 243, 249-250.
- Verstegen, Deborah, and Terry Whitney. "Emerging Judicial Theories of Adequacy and Equity." Educational Policy 11(3) (September 1997): 330-331.
- Verstegen, Deborah A., and Terry Whitney, "From Courthouse to Schoolhouses: Emerging Judicial Theories of Adequacy and Equity." Educational Policy 11(3) (September 1997): 349-350.
- Viadera, Debra. "How Much is Enough?" Education Week (September 29, 1999): http://www.ed.week.org/ewew_printstory.cfm?slug=05financ.h19

- Viadero, Debra. "Under Threat of Closings, N.H. Revives Property Tax." Education Week (November 10, 2000): http://www.edweek.org/ew/ew_printstory.cfm?slug=11nh.h19
- Ward, James, and William Camp. "An Analytical View of Two Decades of Reform in School Finance." Journal of Education Finance 14 (Summer, 1988): 1-6.
- Webb, L. Dean, Martha M. McCarthy, and Stephen B. Thomas. Financing Elementary and Secondary Education. Columbus, Ohio: Merrill, 1988.
- Wohlstetter, Priscilla, and Amy Van Kirk. "School-Based Budgeting: Organizing for High Performance." Paper presented at the annual American Educational Research Association Conference, San Francisco, April 1995.
- Wood, R. Craig, and David C. Thompson. Education Finance Law: Constitutional Challenges to State Aid Plans: An Analysis of Strategies. Topeka, KS: National Organization of Legal Problems in Education, 1993.
- Wise, Arthur E. Rich Schools, Poor Schools: The Promise of Equal Educational Opportunity. Chicago: University of Chicago Press, 1968.

LEGAL CITATIONS

Abbott v. Burke, 495 A.2d. 376 (N.J. 1990).

Abbott II, 119 N.J. 287, 575 A. 2d 359 [60 Ed. Law Rep. [1175]], 1176.

Alabama v. Hunt, 624 SO. 2d 107 (Ala. 1993).

Board of Education of City School District, etc. v. Walter, 390 N.E.2d 813 (Ohio 1979).

Brown v. Board of Education, 347 U.S. 483, 74 S. Ct. 686 (Kansas 1954) 493.

Board of Education, Levittown Union Free School Dist. v. Nyquist, 439 N.E.2d 359 (N.Y. 1982), 363.

Burrus v. Wilkerson, 310 F. Supp. 572 (Vir. 1969).

Coalition for Adequacy and Fairness in School Funding et al. v. State of Florida,
complaint 1994, para. 4, 5, 74.

Coalition for Equitable Funding v. State, 811 P. 2d. 116 (Oregon 1991).

Campbell County School District, State of Wyoming, et al. v. State of Washington, 907
P.2d 1238 (Wy. 1995).

Dupree v. Alma School District No. 30, 651 S.W.2d 90 (Ark. 1983).

Edgewood Independent School District v. Kirby, 777 S.W.2d. 391 (Tex. 1989).

Fair School Finance Council of Oklahoma, Inc. v. Oklahoma, 746 P. 2d 1135 (Okla.
1987).

Gould v. Orr, 244, 633 (Neb. 1993).

Gindl v. Dept. of Education, 396 So. 2^d 1105 (Fla. 1979).

Helena Elementary School District No. 1 v. State, 769 P.2d 684 (Mont. 1989).

Hornbeck v. Somerset County Board of Education, 458 A. 2d 758 (Md. 1983).
Horton v. Meskill, 376 A.2d 359 (Conn. 1977).

McDaniel v. Thomas, 285 S.E.2d 156 (Ga. 1982).

McDuffy v. Secretary of the Executive Office of Education, 615 N.E. 2d 516 (Mass. 1993).

McInnis v. Shapiro, 293 F.Supp. 327 (Ill. 1968).

Milliken v. Green, 212 N.W.2d 711 (Mich. 1973).

Nyquist, 439 N.E. 2d 359 (N.Y. 1982)

Olsen v. State, Or. 554 P.2d 239 (Oregon 1976).

Pauley, 162 W. Va. 672, 255 S.E. 2d 859, 165 (W.Va. 1979).

Pauley v. Kelley, 255 S.E.2d 859 (W.Va.. 1979).

Pawtucket v. Sundlum, 662 A. 2d 40 (R.I. 1994).

Plessy v. Ferguson, 163 U.S. 537.

Plyler v. Doe, 457 U.S. 202, 102 S. Ct. 2382 (1982).

Richland County v. Campbell, 364 S.E. 2d 470 (S.C. 1988).

Rodriguez, 411 U.S. 1, 93 S. Ct. 1278, 36 L.Ed. 2d 16 (Tex. 1973).

Robinson v. Cahill, 303 A.2d 273 (N.J. 1973).

Rose v. Council for Better Education, 790 S.W.2d. 186 (K.Y. 1989).

San Antonio Independent School District v. Rodriguez, 411 U.S. 1 (Tex. 1973).

St. Johns County, Florida v. Northeast Florida Builders Association, 583 So.2d 635, 641, (Fla. 1991).

Serrano v. Priest, 487 P.2d 1241 (Calif. 1972).

Serrano v. Priest, 226 Cal. Rptr. 584 (Calif. 1976).

Tennessee v. Small School Systems et al v. Mc Wherter, 851 S.W. 2d. 139 (Tenn. 1993).

Thompson v. Enkelking, 537 P.2d 635 (Idaho 1975).

Van Dusartz v. Hatfield, 334 F. Supp. 870 (Minn. 1971) at 877.

BIOGRAPHICAL SKETCH

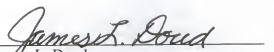
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.


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